TY Sem I

	***************************************			ege of Engineeri					
				AY 2021-22	THS WHEE)	er dan en englandskildspringlik och som en litter i kandenskalanteliskelisterisk förbetet i det som en litteri			
				A1 2021-22 rse Information					
D									
Progra			B.Tech. (Informa	CONTRACTOR A MARCHAN CONTRACTOR AND A STATE OF THE STATE	annonam no vica i pro ventare province que en comprendencia e como e su administrativo de contra en de destructura e de comprendencia e de compren				
Class,	-	**********************	Third Year B. Te	ch., Sem V					
	e Code		5IT301		ener art dannele Morrow de Kristen William week lad Morrow en jober aan de kommande kriste Word is se beken blev de West in 1944 de Kriste West in 1944 de Krist				
	e Nam		Database Enginee						
Desire	d Req	uisites:	Object-Oriented l	Programming Dat	a Structures, Computer Algo	rithms			
Te	eachin	g Scheme		Examination	n Scheme (Marks)				
Lectu	re	2 Hrs/week	T1	T2	ESE	Total			
Tutori	ial	-	20	20	60	100			
Practi	cal		THE RESIDENCE OF THE PARTY OF T						
Intera	ction	PM	THE REPORT OF THE PROPERTY OF	C	redits: 2	PORTO DE LA CONTRACE DE L'ADRESSE DE L'ADRES			
	MARLONAMA SOCIA MERCIA AMARA	HINDERSON CONTRACTOR OF THE STATE OF THE STA	CONTROL OF THE STATE OF THE STA						
			Cou	ırse Objectives					
1	To in	troduce basic c	oncepts of database	To the second se	tems				
2			l designs for database						
3			ssociated with tran		ent				
-		California y Carriero Carriero Carriero Comencia de Carriero Carri	rse Outcomes (CC	and the control of th					
At the	end of		students will be ab						
CO1	yeronamorm unumeranium	A MALOTTINATE COLUMN DES TRANSPORTE DE LA PRINCIPA DEL PRINCIPA DE LA PRINCIPA DEL PRINCIPA DE LA PRINCIPA DEL PRINCIPA DE LA PRINCIPA DEL PRINCIPA DE LA PRINCIPA DEL PRINC	iery language in da		d interaction	Apply			
CO2	Evalu	ate indexing te	chniques for efficie	ent data storage ar	nd retrieval	Evaluate			
CO3	Comp	oare the concur	rency control proto	col on database tr	ansactions	Analyze			
Modu			Mod	ule Contents		Hours			
	ł	troduction:							
I				se Systems, Data	abstraction, Data Models,	3			
			Database Systems.						
					, database schema, keys,				
\mathbf{II}					in Relational Calculus	5			
	i	ntegrity Constraints and Design: Domain Constraints, Referential Integrity, riggers, Normal forms, Functional Dependencies, Decomposition.							
	*****			NAMES OF TAXABLE SERVICES OF THE OWN RESIDENCE AND A STREET OF TAXABLE SERVICES.	, measures of query cost,	Namen on a state fail from a Name Annahada Annahada a martin and common a state faile and a fail			
					essions. Structured Query				
Ш					e (MongoDB, MariaDB,	5			
		oSQL)	•	, ,					
					lices, B+ Tree Index Files,				
IV			Dynamic hashing,	Comparison of In	dexing, Grid files, Bitmap	4			
	rommanni koncerne	dices.	MARKETHARITANIAMAN WANTON MITTO SE ZASTINOS CARACITAN ZON ANTON						
* 7	1			,	ution, Serializability.				
V					se locking protocol, Graph	5			
allenge a selder (promite the header forth and the letter			Time stamp based		ge Structure, Log-Based				
	3	ecovery,	y. Palluic Clas	sincation, storag	ge Birdetare, Log-Dased				
VI	1	• ,	recovery with co	oncurrent transact	tions, buffer management,	4			
		ickups.	<i>y</i>		,				
***************************************		e en en communicación de la companya en en companya en companya en			o oper voor still daam meen kunste voor se de de deel voor de de konklike se Hone verd voor de voorden meels verd de eer Weersche de Hone de de Hone d	en ingelijk mandelen ingelijk in die der (dere 1866) kan der de 1886), die der (1966) kan de 1866) kan de 1866			
				Text Books					
1	Abral	nam Silberscha	AND ADMINISTRAÇÃO DE COMO A PORTO DE COMO DE C		, "Database System Concept	s [*] ,			
1	McG	aw-Hill Educa	tion, 6th Edition, 20	010.	massey war an a second a construction of the second and the second				
2			n, " <i>Database Mana</i>	igement Systems",	, McGraw-Hill Education, 3r	d			
	Editio	on, 2003.	WWW.Milestrates		a gygga en ya anay ya aha ah ya ka ya aha aha aha aha aha aha aha aha aha				

	References
1	J.D. Ullman, "Principles of Database Systems", Galgotia Publications, 2nd Edition, 1999
2	Wiederhold, "Database Design", McGraw Hill Inc, 2nd Edition, 1983
3	C.J.Date, A.Kannan, S.Swamynathan, "An Introduction to Database Systems", Pearson Education, 8th Edition, 2006.
	Useful Links
A CONTRACTOR OF THE PARTY OF TH	
1	https://nptel.ac.in/courses/106/105/106105175/
2	https://nptel.ac.in/courses/106/105/106105175/ http://www.nptelvideos.in/2012/11/database-management-system.html
1 2 3	

						CO-l	PO Ma	apping						
established and open the Panal (1993) becomes the				P	rograi	nme C	utcon	ies (PC)	in to a him hade a transmission		Property of the second state of the second	PS	SO
NAME THE PROPERTY OF THE PROPE	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	- Commonwell and Comm			Section of the set to the section of	3				***************************************			1		
CO2		1		Problement errorent strongen et en	2		************************	\$	en e	************************			1	***************************************
CO3	1	2		***************************************			and the second s		A. 1744-141				THE REST OF THE REST OF THE STATE OF THE STA	2

Assessment

Bloom's Taxonomy Level	T1	Т2	ESE	Total
Remember	Not Allowed	Not Allowed	Not Allowed	Not Allowed
Understand	5	5	10	20
Apply	10	5	15	30
Analyze	5	5	15	25
Evaluate		5	15	20
Create			5	5
Total	20	20	60	100

			llege of Engineering Aided Autonomous In		STORY Plant of Late Anniella Content of Liver State and an adjust A STATE AND					
		And the state of t	AY 2021-22		den er film men dette Mille under der den den film film film eine der film det film besche den den den den den					
		Cou	urse Information							
Progra	nme	B.Tech. (Information	ation Technology)							
	Semester	Third Year B. To	ech., Sem V							
Course		5IT302		rrrrrrrrring for med his til Mission om 1984 med til stille for der britisk for for der britisk for the britis						
Course	e Name	Operating System		ын польного описот вы воли менения можения польности польного выполнения на почения в						
Desire	d Requisites:	Computer Archi	tecture							
NI N I NI		- Andri waa amaa aa o o o o o o o o o o o o o o								
Te	aching Scheme	eme Examination Scheme (Marks)								
Lectur	e 3 Hrs/week	T1	T2	ESE	Total					
Tutori	al -	20	20	60	100					
Practio	cal -	CONTRACTOR AND THE REPORT OF THE PROPERTY OF T								
Intera	ction -		Cre	dits: 3						
		Co	urse Objectives							
1	To introduce variou									
2	To elaborate operat			IN ARROAD MAY HAVE CONTROL OF A						
3	To comprehend the			<u> </u>						
A 4 4 h a			O) with Bloom's Ta	ixonomy Level						
CO1	end of the course, the Distinguish between				Understand					
CO2	Illustrate the concep			та утиварт уветны паст острой титерах устага, на устага поравител, на мога и запечения по того и се е Ма	Apply					
CO3				es in operating system	Analyse					
	annessen en e	49 - 4.0 - 4.0 - 4.0 - 4.0 - 4.0 - 4.0 - 4.0 - 4.0 - 4.0 - 4.0 - 4.0 - 4.0 - 4.0 - 4.0 - 4.0 - 4.0 - 4.0 - 4.0	ngg gas a an ag gadh a sannan a an ag an ann an an an an ann ann		and the second production control to the second					
Modu	le	Mo	dule Contents		Hours					
	Introduction:									
	Notion of opera	ting systems, Com	puter system organi	zation, Computer System						
	architecture, Co	architecture, Computer System Structure, Operating System Operations, Process								
I	Management, M	Management, Memory Management, Storage Management, protection and								
1	security.									
	1 •		_	perating system interface,						
		-		operating system design						
aggeographic and a single concentration of the concentration		tion, operating syst	em structure.	mani kang dalah dalam sa sa samai malam da kala sa da mana ka Mani Sa da Mani Sa da Mani Sa da Mani Sa da Mani						
	Process									
	-			on process, Cooperating						
П	1 * '	•	Communication (,	8					
	1	duling: Basic c	• '	g Criteria, Scheduling						
			neduling, Real time s	cheduling.						
	Inter-process S	•								
III		•	-	ritical Region, The critical	6					
		, Synchronization I	Hardware, Monitors,	, Semaphores.						
	Deadlocks									
IV				for handling deadlocks	5					
		ntion, Deadlock av	oldance, Deadlock	detection, Recovery from						
	deadlock.									
	VIOMONT MAN	gement								
	Memory Mana	-	reinal Address space	- Swanning Contiguous						
	Background, Lo	ogical Versus Phy		e, Swapping Contiguous						
V	Background, Lo Allocation, Pagi	ogical Versus Phy ng, Segmentation,	Segmentation with p		8					
V	Background, Lo Allocation, Pagi Virtual Memo replacement al	ogical Versus Phy ng, Segmentation, ry: Background, gorithms, Allocat	Segmentation with p Demand paging,	paging. Page replacement, Page rashing (Only concept),	8					

VI	File System Management File concept, access methods, directory and disk structure, file-system mounting, file sharing, protection. Implementing File System: File system structure, file-system implementation, directory implementation, allocation methods, free-space management						
	Text Books						
1	James. L. Peterson and A. Silberchatz ,"Operating System Concepts", Addis Publication, 9th Edition, 2018	son Westley					
2	Milan Milenkovic, "Operating System - Concept and Design", TMGH,1st Edition,20	001					
	References						
1	William Stallings," Operating Systems: Internals and Design Principal Publication,7th Edition,2013	es",Peterson					
2	Crowley Charles ," Operating Systems : A Design-Oriented Approach", Mc Publication, 1 st Edition, 2017	Graw Hill					
	Useful Links						
1	https://www.gatevidyalay.com/operating-system/						
2	https://www.javatpoint.com/os-tutorial	MILL SECTION OF THE S					
3	https://www.geeksforgeeks.org/operating-systems/						

						CO-I	PO M	apping						
				P	rograi	mme C	utcon	nes (P())				PS	0
THE STREET CONTRACT TO STREET AND A STREET A	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1				***************************************				****************				2	2	
CO2			2	3	***************************************		***************************************							
CO3		delinated and offendant beautiful account	<u></u>		1						THE TOTAL PROPERTY OF THE PARTY		4	

Assessment

Assessm	ent Plan based	on Bloom's Taxon	omy Level	
Bloom's Taxonomy Level	T1	Т2	ESE	Total
Remember	Not Allowed	Not Allowed	Not Allowed	Not Allowed
Understand	5	5	10	20
Apply	10	5	15	30
Analyze	5	5	15	25
Evaluate	4770-461	5	15	20
Create		Control of the Contro	5	5
Total	20	20	60	100

			ege of Engineering ided Autonomous Ir		
		*	AY 2021-22		
		Cou	rse Information		
Progra	ımme	B.Tech. (Informa	tion Technology)		
	Semester	Third Year B. Te			
	e Code	5 IT 303	**************************************		
~~~~	e Name	Computer Algori	fhm	nong para panamanan na mahanda	
	d Requisites:	Data Structures			
Desire	u requisites.	Data Structures	MA ANNU A-MALAN VOCASIA AIL PROGRAMA A MINORAMA DARING MANAGERIA MANAGERIA A MANAGERIA A MANAGERIA A MANAGERIA		
Тє	eaching Scheme		Examination :	Scheme (Marks)	
Lectur	e 2 Hrs/week	T1	T2	ESE T	'otal
Tutori	al 1 Hr/week	20	20	60	100
Practio	cal -	ann agus de aus annacht de ann an Mhòra de Mhòra de Bhair ann à Amhrèid ann an Amhrèid ann an Amhrèid an Aire an Aire ann ann an Aire ann ann an Aire ann ann ann ann ann ann ann ann ann an	n (an Aireann an Tura an Aireann a	орин на принцип в принцип в принцип в роже допускавания в факт по в положения в поверения в по	
Intera	ction -		Cre	dits: 3	MANAGEMENT AND
		AND THE PROPERTY AND PARTY		O PRIMAR BURNA MINA ARABUM (a) PRIMARIR ZA RAMANIANA POLIT BURNANA POLITICA PARA ARABUM ANA ARABUM	W
		Cou	ırse Objectives		
1	To introduce the con				
2	To define various alg				
3	To comprehend diffe			cation	
	The state of the s		)) with Bloom's Ta	ixonomy Level	
	end of the course, the				
CO1	Apply appropriate al				Apply
CO2	Compare complexity				Analyze Create
CO3	Design dynamic prop	gramming for algor	rium for a given pro		Create
		monomentus an a mila mel Melder removementalische erremisen der behalt alle die de neuer / in han erre / is dem	e antiqui a hele consettiti titi aga (i) con il da helek helek helek (i) timo (il helek helek il helek	Teasy regulated from the Virginian Control of the September of the Control of the September of the Control of t	
Modu	la	Mo	dule Contents		Hours
171004	Introduction:	IVA	oute Contents		arvur 5
I	Design and An	Dynamic Program		ithms: Knapsack problem, ain multiplication, Longest	5
П	Principles of techniques, chara parallel algorithm Programming u	parallel algorith acteristics of task a a model	pasics, send, receive	liminaries, Decomposition pping techniques, overhead, e, overlapping computation	5
Ш	All-Pairs Shorte Shortest paths an	est Paths (APSP) a d matrix multiplica			4
IV	Single-Source Single-Shortest paths a	hortest Path (SSS) and relaxation, Be	P)	hm, Single-source shortest	4
V	String Matching The Rabin-Karp Computational C	g: algorithm, Knuth-M Geometry: Determi	Morris-Pratt algorith	m. pair of segments intersects,	4
VI	NP-Completenes Approximation	s and Approximat s: NP completenes	t <b>ion Algorithm</b> s and reducibility, N	P-complete problem. m, The travelling-salesman	4
			Text Books		

1	Thomas H. Cormen, Charles E. Leiserson and Ronald L. Rivest, "Introduction to Algorithms", Third Edition the MIT Press Cambridge, London, England, 2009
2	Anath Grama, Ansul Gupta, George Karypis, Vipin Kumar, "Introduction to parallel computing", Second Edition, Pearson Education, 2003 (For mdule IV)
	References
1	Horrowitz, Sahni Rajasekaran, "Computer Algorithms", Computer Science, W. H. Freeman and company Press, New york, 1997
2	
2	
	Useful Links
1	https://nptel.ac.in/courses/106/104/106104019/
2	https://nptel.ac.in/courses/106/101/106101060/

			Andrews Market Market			CO-l	PO Ma	ıpping							
THE REAL PROPERTY OF THE PROPE	Programme Outcomes (PO)													PSO	
Alexandria (Alexandria de Alexandria de Alexandria de Alexandria de Alexandria de Alexandria de Alexandria de A	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
CO1		na magnapaggy na anayonn a	The second section of the section of the second section of the section of	ometil detached for his dish have engr	3				***************************************	****************************		1			
CO2		1		4	2	are the extensive respectively and consists			***************************************		Control to the State of the State of the State of State o		1	***************************************	
CO3	1	2				**************************************	PRINCIPAL VALORIAN AND AND AND AND AND AND AND AND AND A	Charles and a control of the control						2	
According to the control of the cont		ACTIVITY OF STREET, ST	and the constant and distance of a	ent e herman dy neu fe ma an de eu m <b>e</b> mayerapene	****			************************		***************************************			<u></u>		

## Assessment

Assessm	CHU I IAII DASCU	on Bloom's Taxon	iomy Level	
Bloom's Taxonomy Level	<b>T1</b>	T2	ESE	Total
Remember	Not Allowed	Not Allowed	Not Allowed	Not Allowed
Understand	5	5	10	20
Apply	10	5	15	30
Analyze	5	5	15	25
Evaluate		5	15	20
Create			5	5
Total	20	20	60	100

assaulativa viikas kun ta assaula taa etai kaan perimada adi kilifan ee Filled Andrea Andrea Andrea Andrea Andr			ge of Engineering, led Autonomous In						
		A.	Y 2021-22						
		Cours	e Information						
Programme		B.Tech. (Information Technology)							
Class, Seme	ster	Third Year B. Tech., Sem V							
Course Code		5 IT 351							
Course Nan	ne	Database Engineering Lab							
Desired Requisites:		Object-Oriented Programming, Data Structures, Computer Algorithms							
	igg talle de Bellet (1960 e. ) ig tallet steat a debourd je ser de self for under 17 steat of self-tallet de 1971 (1960).								
Teachin	ig Scheme		Examination S	cheme (Marks)					
Lecture		LA1	LA2	ESE	Total				
Tutorial	-	30	30	40	100				
Practical	2 Hrs/Week								
Interaction	-	Credits: 1							
Albert 2 to the following section of the section of									
		Cour	se Objectives						
		gram for database							
		advanced SQL que		database systems.	es per que en colonida en culta da dalo de man del del de del circa polonida y constituida de la constituida d				
3   To c		transaction manage							
A 4 4 1 1 -	الاحطار المسار والأطار والمرار والمراج المسار والمسار ومع المسار والمسار والمراج والمراج المسار والمراج والمسارة	se Outcomes (CO)		xonomy Level					
At the end o	i uie course, the	students will be ab	ne w,						

## List of Experiments / Lab Activities

## List of Experiments:

management system

CO₁

CO₂

CO₃

- 1. Implement SELECT and PROJECT operation Assignment, Implement INSERT, DELETE and UPDATE operation database
- 2. Perform String operations and Aggregate functions on database

Illustrate relational database system in the form of ER diagram

Evaluate transaction processing and recovery mechanisms in

Implement basic and advanced SQL Query on databases

- 3. Perform Inner and Outer Join operations on database Assignment, Domain constraints & Referential Integrity Assignment
- 4. Program for sparse index and dense index Assignment
- 5. Program for static hashing Assignment, Program for Dynamic hashing Assignment
- 6. Program for log based protocol for transaction Assignment
- 7. Implementation of JDBC/ODBC driver for database connectivity
- 8. Program for Time Stamp protocol for transaction Assignment
- 9. Program for Deadlock Detection Assignment
- 10. perform CRUD (Create, Read, Update, Delete) operations on MongoDB databases
- 11. filtering for data efficiently on MongoDB databases
- 12. Working with command prompts and create database and tables on MariaDB.
- 13. Perform CRUD (Create, Read, Update, Delete) operations on MariaDB.

_	Text Books  Abraham Silberschatz, Henry F. Korth, and S. Sudarshan, "Database System Concepts",
1	McGraw-Hill Education, 6th Edition, 2010.
2	Raghu Ramakrishnan, "Database Management Systems", McGraw-Hill Education, 3rd
<u></u>	Edition, 2003.

Apply

Apply

Evaluate

database

2	Wiederhold, "Database Design", McGraw Hill Inc, 2nd Edition, 1983
3	C.J.Date, A.Kannan, S.Swamynathan, "An Introduction to Database Systems", Pearson Education, 8th Edition, 2006.
174	
	Useful Links
1	https://nptel.ac.in/courses/106/105/106105175/
2	http://www.nptelvideos.in/2012/11/database-management-system.html

Programme Outcomes (PO)									PS	PSO				
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	1	2	***************************************	Militaria taribania kantuninga ayadada	2		AND THE PROPERTY OF THE PARTY O		**************************************		2	1		
CO2	Promis remandable	2	A		2	***************************************	or to the two spanners.	TATALON PARAMETERS SON			3	2	1	<u></u>

#### Assessment

There are three components of lab assessment, LA1, LA2 and Lab ESE.

IMP: Lab ESE is a separate head of passing. LA1, LA2 together is treated as In-Semester Evaluation.

Assessment	Based on	Conducted by	Typical Schedule (for 26-week Sem)	Marks
LA1	Lab activities,	Lab Course	During Week 1 to Week 6	20
LAI	attendance, journal	Faculty	Marks Submission at the end of Week 6	30
LA2	Lab activities,	Lab Course	During Week 7 to Week 12	20
LAZ	attendance, journal	Faculty	Marks Submission at the end of Week 12	30
Lab ESE	Lab activities,	Lab Course	During Week 15 to Week 18	40
Lau ESE	attendance, journal	Faculty	Marks Submission at the end of Week 18	40

Week 1 indicates starting week of a semester. The typical schedule of lab assessments is shown, considering a 26-week semester. The actual schedule shall be as per academic calendar. Lab activities/Lab performance shall include performing experiments, mini-project, presentations, drawings, programming and other suitable activities, as per the nature and requirement of the lab course. The experimental lab shall have typically 8-10 experiments.

## Assessment

Bloom's Taxonomy Level	T1	Т2	ESE	Total
Remember	Not Allowed	Not Allowed	Not Allowed	Not Allowed
Understand	5	5	10	20
Apply	10	5	15	30
Analyze	5	5	15	25
Evaluate		5	15	20
Create			5	5
Total	20	20	60	100

Walchand	College of	f Engineer	ing, Sangli
(Governme	ent Aided A	Autonomou.	s Institute)

#### AY 2021-22

	Course Information
Programme	B.Tech. (Information Technology)
Class, Semester	Third Year B. Tech., Sem V
Course Code	51T345
Course Name	Mini Project - 2
Desired Requisites:	Java programming

Teachin	ig Scheme		Examination	Scheme (Marks)	
Lecture	-	LA1	LA2	Lab ESE	Total
Tutorial	-	30	30	40	100
Practical	2 Hrs/Week		an a dha an		
Interactio	_		Cro	edits: 1	
n	***************************************				

	Course Objectives	
1	To provide guidance to select & build the ideas	
2	To find real-world challenges by IT based Solution	
3	To inculcate team spirit in students by project management	
	Course Outcomes (CO) with Bloom's Taxonomy Level	
At the	end of the course, the students will be able to,	
CO1	Implement the software application using trending/specified programming language/technology	Apply
CO2	Identify the real world problems & apply software engineering practices	Analyze
CO3	Design software application and project report for submission	Create
·		Accessor and the second

## List of Experiments / Lab Activities

## List of Experiments:

Mini-project is to be carried out in a group of maximum 5 to 6 students.

Each group will carry out a mini-project by developing any application software based on the following areas.

- 1. Design and develop application using any one or more programming languages: Java with concepts swing, AWS, threading, APIs, etc.
- 2. Industry based problem / Sponsored application /Game/ Interdisciplinary application /socially useful application / Problem solving of previously learned complex concepts.
- 3. Project group should achieve all the proposed objectives of the problem statement.
- 4. The work should be completed in all aspects of design, implementation and testing and follow software engineering practices.
- 5. Project reports should be prepared and submitted in soft and hard form along with the code and other dependency documents. Preferable use online code repositories (github/bitbucket)
- 6. Project will be evaluated continuously by the guide/panel as per assessment plan.
- 7. Presentation and report should use standard templates provided by department.

Project report (pre-defined template) should be prepared using Latex/Word and submitted along

with soft copy on CD/DVD (with code, PPT, PDF, Text report document & reference material) or

on an online repository.

Students should maintain a project log book containing weekly progress of the project.

	Text Books
1	Rajendra Kumbhar, "How to Write Project Reports, Ph. D. Thesis and Research Articles", Universal Prakashan, 2015
2	Marilyn Deegan, "Academic Book of the Future Project Report", A Report to the AHRC & the British Library, 2017
TEST.	
	References
1	References  https://www.youtube.com/watch?v=0oSDa2kf518 (report writing )
1 2	
1 2	
1 2	https://www.youtube.com/watch?v=0oSDa2kf5I8 (report writing )
1	https://www.youtube.com/watch?v=0oSDa2kf5I8 (report writing )  Useful Links  https://pats.cs.cf.ac.uk/wiki/lib/exe/fetch.php?media=project-report.pdf
1 2 1 2 3	https://www.youtube.com/watch?v=0oSDa2kf5I8 (report writing )  Useful Links

	Programme Outcomes (PO)										PSO			
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1		1			2		and the second s		The second se			3	erra karkan aka dara kanada yan menangangan yang pend	······································
CO2	***************************************		İ			***************************************		plater provide annulo del accordica de discharación de la construcción	engeneda yan sakar ay akaran kasa sa	2			2	

## Assessment

There are three components of lab assessment, LA1, LA2 and Lab ESE.

IMP: Lab ES	E is a separate head of	f passing. LA1, LA	A2 together is treated as In-Semester Evalua	tion.
Assessment	Based on	Conducted by	Typical Schedule (for 26-week Sem)	Marks
LA1	Lab activities,	Lab Course	During Week 1 to Week 6	20
LAI	attendance, journal	Faculty	Marks Submission at the end of Week 6	30
LA2	Lab activities,	Lab Course	During Week 7 to Week 12	20
LAZ	attendance, journal	Faculty	Marks Submission at the end of Week 12	30
Lab ESE	Lab activities,	Lab Course	During Week 15 to Week 18	10
Lau ESE	attendance, journal	Faculty	Marks Submission at the end of Week 18	40

Week 1 indicates starting week of a semester. The typical schedule of lab assessments is shown, considering a 26-week semester. The actual schedule shall be as per academic calendar. Lab activities/Lab performance shall include performing experiments, mini-project, presentations, drawings, programming and other suitable activities, as per the nature and requirement of the lab course. The experimental lab shall have typically 8-10 experiments.

Bloom's Taxonomy Level	LA1	LA2	Lab ESE	Total
Remember	Not Allowed	Not Allowed	Not Allowed	Not Allowed
Understand				And the State Stat
Apply	15	10	10	35
Analyze	5	10	5	20
Evaluate	5	5	10	20
Create	5	5	15	25
Total Marks	30	30	40	100

		ng ng gapat panganan na mga at a a a a a a a a a a a a a a a a a		ge of Engineering ded Autonomous In		go Maria de Selección de Selecc					
			A	Y 2021-22	armadiliikkohdusuustadusuus vadi kadan kulti kan ee tiitikse, yeest virulus Poht Por virulus kohantii 1990 halkitaasid (he kultivus viitikse) viiti						
			Cours	se Information							
Progra	amme		B.Tech. (Information Technology)								
Class,	Semes	ter	Third Year B. Tec	h., Sem V	communication control to the temporary control of the security of the control of	and the second s					
Course	e Code		5IT346		Name to be a second of the sec	approved the second	A DOMESTIC AND A STATE OF THE PARTY OF THE P				
Course	e Namo	2	Mini Project - 3			and commended it was about the second					
Desire	d Requ	uisites:	Android programm	ning		ologicus yrddioladdiodd Colean a ddiolydio ymnoddiod					
	***************************************	NA BERTHAN MANAGEMENT AND A SECURITION OF THE SECURITIES OF THE SE					AND MARKETT TO THE PARTY OF THE				
Te	eaching	g Scheme		Examination Scheme (Marks)							
Lecture -		-	LA1	LA2	Lab ESE	T	otal				
Tutorial ·		### ### ### ### ### ### ### ### ### ##	30	30	40						
Praction	cal	2 Hrs/Week									
Intera	ction	And the second and analysis of a last second distribution of the second dis	Credits: 1								
	J		A		CALINA, COMPANIA MARIA M						
			Cour	rse Objectives							
1	To pro	ovide guidance	to select ideas in me	obile application d	evelopment	Control of the Contro	CONTRACTOR				
2	To fin	d real-world cl	allenges by IT base	d Solution	Market Market School (1997) and company of the second control of t						
3	To bu		ls of student to work								
			rse Outcomes (CO)		ixonomy Level						
At the			students will be able								
CO1		age/technology			ng/specified program	nming	Apply				
CO2			ld problems & apply				Analyze				
CO3	Desig	n software app	lication and detailed	project report for	submission	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Create				

## List of Experiments / Lab Activities

## **List of Experiments:**

Mini-project is to be carried out in a group of maximum 5 to 6 students.

Each group will carry out a mini-project by developing any application software based on the following areas.

- 1. Design and develop mobile application using any scripting language with android studios (Kotlin, Java, etc) (Flutter/Eclipse/ android studio/etc.)
- 2. Industry based problem / Sponsored application /Game/ Interdisciplinary application /socially useful application / Problem solving of previously learned complex concepts.
- 3. Project group should achieve all the proposed objectives of the problem statement.
- The work should be completed in all aspects of design, implementation and testing and follow software engineering practices.
- 5. Project reports should be prepared and submitted in soft and hard form along with the code and other dependency documents. Preferable use online code repositories (github/bitbucket)
- 6. Project will be evaluated continuously by the guide/panel as per assessment plan.
- Presentation and report should use standard templates provided by department.

Project report (pre-defined template) should be prepared using Latex/Word and submitted along with soft copy on CD/DVD (with code, PPT, PDF, Text report document & reference material) or on an online repository.

	Students should maintain a project log book containing weekly progress of the project.
	Text Books
1	Rajendra Kumbhar, "How to Write Project Reports, Ph. D. Thesis and Research Articles", Universal Prakashan, 2015
2	Marilyn Deegan, "Academic Book of the Future Project Report", A Report to the AHRC & the British Library, 2017

***************************************	
	References
1	https://www.youtube.com/watch?v=0oSDa2kf5I8 (report writing )
	Useful Links
1	https://pats.cs.cf.ac.uk/wiki/lib/exe/fetch.php?media=project-report.pdf
2	http://users.iems.northwestern.edu/~hazen/Writing%20Project%20Reports%202004a.pdf
3	https://www.upgrad.com/blog/java-project-ideas-topics-for-beginners/
4	https://www.geeksforgeeks.org/computer-science-projects/

						CO-l	PO Ma	apping						
		Programme Outcomes (PO)									PS	PSO		
PROCESSES AND	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1		1		artifolia autolia la radio antico como fue gue	2	***************************************	*****************					3		ATTION OF THE STATE OF THE STAT
CO2				odia diberioli bake se e comendo y						2			2	
CO3	***************************************	petrologica de la la constanti d'activa de la constanti d'activa de la constanti de la constanti de la constanti	Darlin (M. n. Sendri (Brazil VI) nazyod N. drudi (n. br	***************************************		a kanas (A khari Mariyay) wa (A).	3				2			1

#### Assessment

There are three components of lab assessment, LA1, LA2 and Lab ESE.

IMP: Lab ESE is a separate head of passing. LA1, LA2 together is treated as In-Semester Evaluation.

Assessment	Based on	Conducted by	Typical Schedule (for 26-week Sem)	Marks
LA1	Lab activities,	Lab Course	During Week 1 to Week 6	20
LAI	attendance, journal	Faculty	Marks Submission at the end of Week 6	30
LA2	Lab activities,	Lab Course	During Week 7 to Week 12	20
LAZ	attendance, journal	Faculty	Marks Submission at the end of Week 12	30
Lab ESE	Lab activities,	Lab Course	During Week 15 to Week 18	10
Lao ESE	attendance, journal	Faculty	Marks Submission at the end of Week 18	40

Week 1 indicates starting week of a semester. The typical schedule of lab assessments is shown, considering a 26-week semester. The actual schedule shall be as per academic calendar. Lab activities/Lab performance shall include performing experiments, mini-project, presentations, drawings, programming and other suitable activities, as per the nature and requirement of the lab course. The experimental lab shall have typically 8-10 experiments.

Diam's Taxonomy I aval	LA1	I.A2	T - L ECE	70-4-1
Bloom's Taxonomy Level	LAI	LAZ	Lab ESE	Total
Remember	Not Allowed	Not Allowed	Not Allowed	Not Allowed
Understand	\$ 100 miles (100 miles			
Apply	15	10	10	35
Analyze	5	10	5	20
Evaluate	5	5	10	20
Create	5	5	15	25
Total Marks	30	30	40	100

#### Walchand College of Engineering, Sangli (Government Aided Autonomous Institute) AY 2021-22 **Course Information** B.Tech. (Information Technology) **Programme** Third Year B. Tech., Sem V Class, Semester Course Code 5 ET311 Professional Elective 1: Distributed Computing Course Name **Desired Requisites: Teaching Scheme Examination Scheme (Marks)** 3 Hrs/week **T1** Total Lecture **T2 ESE** 20 20 60 100 **Tutorial** Practical Credits: 3 Interaction **Course Objectives** To introduce the various aspects of modern distributed systems. 1 To elaborate distributed architecture, synchronization, consistency and replication, fault 2 tolerance, security, and distributed file systems To explain the contemporary knowledge in parallel and distributed computing 3 Course Outcomes (CO) with Bloom's Taxonomy Level At the end of the course, the students will be able to, Comprehend the fundamentals of various big data analytics techniques Understand Distinguish the various approach to implement distributed environment CO₂ Analyze Evaluate the reliability and performance of various algorithms of distributed Evaluate CO₃ system Module **Module Contents** Hours **Introduction to Distributed Systems:** Task Creation and Termination (Async, Finish), Tasks in Java's Fork/Join I 6 Framework, Computation Graphs, Work, Span, Multiprocessor Scheduling **Distributed System with Parallelism:** Parallel Speedup, Amdahl's Law, Reciprocal ArraySum using Async-7 $\Pi$ Finish. ReciprocalArraySum using RecursiveAction's in Java's Fork/Join Framework **Functional Parallelism:** Futures: Tasks with Return Value, Futures in Java's Fork/Join 6 III Framework, Memoization, Java Streams, Data Races and Determinism Data flow Synchronization and Pipelining: Split-phase Barriers with Java Phasers, Point-to-Point Sychronization IV with Phasers. 7 One-Dimensional Iterative Averaging with Phasers, Pipeline Parallelism, Data Flow Parallelism **Distributed Map Reduce:** Introduction to Map-Reduce, Hadoop Framework, Spark Framework, TF- $\mathbf{v}$ IDF Example, Page Rank Example, Demonstration: Page Rank Algorithm 7 in Spark **Client-Server Programming:** Introduction to Sockets, Serialization/Deserialization, Remote Method VI Invocation, Multicast Sockets, Publish-Subscribe Mode, Demonstration: 6 File Server using Sockets **Text Books** Andrew S. Tanenbaum and Maarten Van Steen, "Distributed Systems: Principles and 1 Paradigms", 2nd edition, Pearson Education, 2007.

2	George Coulouris, Jean Dollimore, Tim Kindberg, , "Distributed Systems: Concepts and Design", 4th Edition, Pearson Education, 2005.
	References
1	A. S. Tanenbaum and M. V. Steen, "Distributed Systems: Principles and Paradigms", Second Edition, Prentice Hall, 2006
And the second s	Useful Links
	Module I, II, III, IV
	https://www.coursera.org/learn/parallel-programming-in-java?specialization=pcdp#syllabus
1	Module V, VI
	https://www.coursera.org/learn/distributed-programming-in-
	java?specialization=pcdp#syllabus

**************************************		Programme Outcomes (PO)										PSO			
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
CO1	3		1				The state of the s	1			OF PROMETOR REPORTS AND ADDRESS.	Comp before fixed through a parameters	2	THE TOTAL PROPERTY.	
CO2		1					ela haba e compresso e vera moran			***************************************				***************************************	
CO3	2	er entrette vorheest hage hoof Africa estate som						<u> </u>			and the second second second	1		1	

## Assessment

Assessm	ent Plan based	on Bloom's Taxon	omy Level	
Bloom's Taxonomy Level	T1	T2	ESE	Total
Remember	Not Allowed	Not Allowed	Not Allowed	Not Allowed
Understand				
Apply	5	10	5	20
Analyze	5	5	10	20
Evaluate	5	5	15	25
Create	15	10	10	35
Total	20	20	60	100

				ollege of Engineeri					
*************************			(Government	t Aided Autonomous	Institute)	igi roqiqiy yaya gara qoʻra qiyyayi orang 10 arisonooliga sa Parison Ashir Parison oo isti ali 1900 1900 1900 1			
			C	AY 2021-22 ourse Information					
Duggu			ALCONOMICS TO SERVICE AND ADDRESS OF THE PROPERTY OF THE PROPE	nation Technology)					
Progra Class,		Anti-Anti-Anti-Anti-Anti-Anti-Anti-Anti-	Third Year B.						
Cours			5 IT 312			MA ANDREW JANOSE TAMAN ESTA A TOMAN STREET, AND A STREET,			
Cours					Programming Languages				
		uisites:	C & CPP Progr	Note that the second of the se	Togramming Languages				
Desire	u Ney	misites.	C & CII I logi	anning					
Te	achin	g Scheme	1	Examinatio	n Scheme (Marks)				
Lectur		3 Hrs/week	T1	T2	ESE	Total			
Tutori		J IIIS/ WCCK	20	20	60	100			
Practi				A. C.					
Intera			**************************************	·····	redits: 3	en er a versen år mennere senere afterne er en årekklik som et e visibli dener uppre, der halt halte år			
писта	CHUII				1 Curto. J	gilyyddy cynnysgau o cynyr fyr o gaerdig ynggynor dae ddirdd o blada (1840 a o blad a 1846).			
				ourse Objectives					
1	Toir	troduce paradi		Go Programming La	anouage				
2				indling and error ha					
3				for process synchro					
J	1 200			CO) with Bloom's					
At the	end of		students will be		14201011, 2010.				
CO1				concepts using Rub	V	Apply			
CO2				ng using Ruby and		Apply			
CO3				tion problem using		Create			
COS	Trop	ose the solution	1 Ior Syncinomiza	don proofen doing	OU Lunguago	Cicae			
Modu	le		M	odule Contents		Hours			
TATOGG	and the same of the same of	ntroduction to	Ruby Program						
	1			~	Command Line Arguments				
I		Brief history of Ruby, Installing & running Ruby, Command Line Arguments, Numbers, Text & Strings, Arrays & Hashes, Symbols, Expressions (True, False,							
•		fil)	x builigs, Allays	& Hashes, Bylliool	s, Expressions (True, Taise,	7			
			s & Objects: Obje	ects, Classes, Varial	bles				
			Statements and	the state of the s					
				eption Handling, T	hreads & Fibers				
				7					
II		Classes, Modules & Objects: Simple Ruby Classes, Object Instances, Attributes, Inheritance, Persistence							
	1	Methods, Attributes & Variables: Setter & Getter methods, Method Visibility							
	1	(Access Control), Instance Variables							
			ming & File Hai		promote a transfer from the first of the first first from the first first from the first from t				
			~	<del>-</del>	& Classes, Blocks &	6			
III		Meta-programming :Exceptions, Types, Modules & Classes, Blocks & Strings, Variables, Missing Methods & Constants, Custom Structures,							
	Į.		<del>-</del>		i				
				reaus, 1/O Objects, 1	Reading file, writing file.				
***			Go Language	4 4 .4					
IV	- 1		-		on, variables, assignments,	6			
		A Commence of the Commence of	· · · · · · · · · · · · · · · · · · ·	variables, arrays, sl	IICE				
**		ata Types and		A		-			
V				types, functions, c	ontrol statements, methods,	6			
		terface, pointe		Llos					
<b>X</b> 7 <b>Y</b>			ith Shared varia		armahanization madraca				
VI			n, mutual excl	iusion, incliory	synchronization ,package	7			
***************************************	1 <b>I</b>	nplementation		ALTERNATURE A TREMENIA PROPERTY MANAGEMENT AND MEMBERSHAM AND	nggg vick same still til i vick still still sen er en i trenet fra framentet stille i villengelen fræderingspensteppin og springspelse	MINISTERIAL TO A STATE OF THE S			
				Tort Dagler					
	Dave	I Elanacan V-	kihira Mataumat	Text Books	uammina I anarrana Euro-Al-	na Vou Nacd			
1	1	• .			ramming Language: Everythi	ng 10u weed			
			; 1st edition (12 F		Go Programming Language	", Pearson			
2			tion (1 February 2		so i rogramming Lunguuge	, i carson			
	Luuc	muui, i iist Mi	aon (i i coruary z						

	References
1	Yukihiro Matsumoto, David Flanagan, "The Ruby Programming Language", Shroff,1st Edition 2008.
2	Caleb Doxsey, "An Introduction to Programming in Go", CreateSpace Independent Publishing Platform (3 September 2012)
	Useful Links
1	https://onlinecourses.swayam2.ac.in/aic20_sp37/preview
2	https://www.javatpoint.com/ruby-tutorial
3	https://www.ruby-lang.org/en/documentation/quickstart/
4	https://gobyexample.com/
5	https://www.javatpoint.com/go-tutorial
6	https://www.coursera.org/specializations/google-golang

						CO-I	PO Ma	apping					1.50	
	7				Prograi								PS	O
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1				2										entre en
CO2		2			3		***************************************				***************************************		2	
CO3			3		3								2	1

## Assessment

Assessm	ent Plan based	on Bloom's Taxon	omy Level	
Bloom's Taxonomy Level	T1	Т2	Lab ESE	Total
Remember	Not Allowed	Not Allowed	Not Allowed	Not Allowed
Understand	5	5	10	20
Apply	10	5	15	30
Analyze	5	5	15	25
Evaluate		5	15	20
Create			5	5
Total	20	20	60	100

		Minimum Parlaman no Alberta da Johanna Parlaman na Salaman Andrea (Salaman)		ded Autonomous In	stitute)	
				AY 2021-22		
T) com			· ·	se Information		
Progra	***	-4	B.Tech. Informat	######################################	epina daga pangang ang nagang naganan yang naganan sa ang naganan nagang naganan nagan nagan sa ang nagan da and nagan da nagan nagan da nag	
Class,		But the College of the second college of the colleg	Third Year B. Te	cn., Sem v	oo aalaan ka	ng digunggang ang ang ang ana ana kandahan guduka Wakababban ni Propinsi dada Yaribada dari
Course Course			GIJ 313	tive 1: Graph Theor	of medical materials and an anticological effective analysis of phosphale constant region of the hards an execution of the set of conference of the set of the of the	
		ng kalabib kalamang kalamang kanang kanan kanyakan kanbang kanang kanang ang ang ang ang ang ang ang ang an	Professional Elec	тие 1: Спари тисог	<b>y</b>	CALLY COMMENTS OF THE PROPERTY
Desire	a Key	uisites:		HILLOHINI VI WA WARION A SUFERIOR WAS ARRESTED AND ARRESTED FOR SUFERIOR STATE OF SU	nana pamananan para para para baran de agama na pahapaha para la mata da la da la da da da da da da da da da d	
Та	aahine	g Scheme		Examination S	ohomo (Marks)	
Lectur		3 Hrs/week	T1	T2	ESE	Total
Lectui Tutori	************	J III O WOOK	20	20	60	100
Practie	***************************************		<b>20</b>			100
Intera	•••••	_		Cred	itc• 3	
LIIIVI	CLIVIA					
			Con	rse Objectives		
1	To pi	rovide basics of	of graph theory			Control of the Control of the Control of Con
2				h in concern with a	onlications	
3				applications of grap		
				) with Bloom's Ta		
At the	end of	AND DESCRIPTION OF THE PROPERTY OF THE PROPERT	e students will be a	and the second s		
CO1				hs, circuits and trees		Understand
CO2	<u> </u>			real-time application		Analyze
			ndependent researc	***************************************		Create
CO3	ונטען	311 Righma ror r	Machemaciii 1000ar			Cicaic
*#~# ₁₁	w _		Modu	le Contents		Hours
Modu		4 devotion to	Modu o Graphs, Paths at			= flvuis
I					nplete and bi-partite	6
1			graphs, Basic prope phism of graphs, Pa		Helete and or-barres	U
13.11.11.11.11.11.11.11.11.11.11.11.11.1				IIIS and oncom		
	1 👼	" Cot and Pl	U TI U S			
		ut Set and Plaut sets. conn		rability network f	lowe isomorphism.	
	C	ut sets, conn	ectivity and separ	* '	lows, isomorphism,	
П	C P	ut sets, conn lanner graphs	ectivity and separ , Kuratowski's tv	wo graphs, represe	entation of planner	7
П	C P gr	ut sets, conn lanner graphs raphs, detecti	ectivity and separ s, Kuratowski's two on of Planarity,	wo graphs, represe Vertex Colouring	entation of planner of graphs, Edge	7
П	C P gr	ut sets, conn lanner graphs raphs, detecti	ectivity and separ s, Kuratowski's two on of Planarity,	wo graphs, represe	entation of planner of graphs, Edge	7
п	C P gr C	ut sets, conn lanner graphs raphs, detecti olouring of gr	ectivity and separ s, Kuratowski's two on of Planarity, aphs,The four-colo	wo graphs, represor Vertex Colouring ur and five-colour the	entation of planner of graphs, Edge	7
П	C P gr C	ut sets, conn lanner graphs raphs, detecti olouring of grave Veighted Grap	ectivity and separate, Kuratowski's two of Planarity, aphs, The four-coloph and Matrix rep	wo graphs, represe Vertex Colouring ur and five-colour the presentation:	entation of planner of graphs, Edge neorems	7
III	C P gr C	ut sets, conn lanner graphs raphs, detecti olouring of graphs Veighted Graphs ulerian Graphs	ectivity and separ s, Kuratowski's two on of Planarity, aphs,The four-color ph and Matrix reps, Hamiltonian cycl	vo graphs, represe Vertex Colouring ur and five-colour the presentation: es, Matrix represent	entation of planner of graphs, Edge neorems	7
	C P gr C	ut sets, conn lanner graphs raphs, detecti olouring of graphs Veighted Graphs derian Graphs hordal graphs,	ectivity and separate, Kuratowski's two of Planarity, aphs, The four-colouph and Matrix reps, Hamiltonian cycl, Weighted graphs,	wo graphs, represe Vertex Colouring ur and five-colour the presentation:	entation of planner of graphs, Edge neorems	
	C P gr C C th	ut sets, conn lanner graphs raphs, detection olouring of graphs weighted Graphs hordal graphs, teorem and its	ectivity and separate, Kuratowski's two of Planarity, aphs, The four-colouph and Matrix reps, Hamiltonian cycle, Weighted graphs, application	vo graphs, represe Vertex Colouring ur and five-colour the presentation: es, Matrix represent	entation of planner of graphs, Edge neorems	
	C P gr C C th	ut sets, conn lanner graphs raphs, detecti olouring of gra- veighted Grap ulerian Graphs, hordal graphs, teorem and its graph Algorit	ectivity and separate, Kuratowski's two of Planarity, aphs,The four-color ph and Matrix reps, Hamiltonian cycle, Weighted graphs, application hm:	Vertex Colouring ur and five-colour the oresentation: es, Matrix represent Matching's in graph	entation of planner of graphs, Edge neorems eation of graphs, as, Hall's 'marriage'	
	C P gr C C th	ut sets, conn lanner graphs raphs, detecti olouring of gra- veighted Grap ulerian Graphs, hordal graphs, leorem and its raph Algorith ravelling sales	ectivity and separate, Kuratowski's two of Planarity, aphs, The four-color of the and Matrix reps, Hamiltonian cycle, Weighted graphs, application hm:	Vertex Colouring ur and five-colour the resentation: es, Matrix represent Matching's in graph	entation of planner of graphs, Edge neorems eation of graphs, as, Hall's 'marriage' roblem, Distances in	
III	C P gr C C th	ut sets, conn lanner graphs raphs, detecti olouring of gra- veighted Grap ulerian Graphs, hordal graphs, teorem and its raph Algorith ravelling sales raphs, Shorte	ectivity and separate, Kuratowski's two of Planarity, aphs, The four-color ph and Matrix reps, Hamiltonian cycle, Weighted graphs, application hm: sman's problem & st path and Dijl	Vertex Colouring ur and five-colour the cresentation: es, Matrix represent Matching's in graph Chinese postman preservas algorithm,	entation of planner of graphs, Edge neorems eation of graphs, as, Hall's 'marriage'	6
III	C P gg C C th	ut sets, connlanner graphs raphs, detection olouring of graphs decreased and its raph Algorithravelling sales raphs, Shorte lgorithm, Bell	ectivity and separate, Kuratowski's two of Planarity, aphs, The four-colouph and Matrix reps, Hamiltonian cycle, Weighted graphs, application hm: sman's problem & st path and Dijleman-Ford Algorith	Vertex Colouring ur and five-colour the cresentation: es, Matrix represent Matching's in graph Chinese postman preservas algorithm,	entation of planner of graphs, Edge neorems eation of graphs, as, Hall's 'marriage' roblem, Distances in	6
III IV	C P gg C C th	ut sets, connlanner graphs raphs, detection olouring of graphs decided Graphs and its raph Algorith ravelling sales raphs, Shorte lgorithm, Bell panning Tree	ectivity and separate, Kuratowski's two of Planarity, aphs, The four-colouph and Matrix reps, Hamiltonian cycle, Weighted graphs, application hm: sman's problem & st path and Dijkman-Ford Algorith:	Vertex Colouring ur and five-colour the resentation: es, Matrix represent Matching's in graph Chinese postman prostra's algorithm, m	entation of planner of graphs, Edge neorems  tation of graphs, ns, Hall's 'marriage'  roblem, Distances in Floyd — Warshall	7
III	C P gg C C th G T gg A S T	ut sets, connlanner graphs raphs, detection olouring of graphs derived Graphs decrement and its raph Algorith ravelling sales raphs, Shorte lgorithm, Bell panning Tree rees, Spanning	ectivity and separate, Kuratowski's two of Planarity, aphs, The four-color ph and Matrix reps, Hamiltonian cycle, Weighted graphs, application hm:  sman's problem & st path and Dijkman-Ford Algorith:  gg tree in graphs,	Vertex Colouring ur and five-colour the resentation: es, Matrix represent Matching's in graph Chinese postman prostra's algorithm, m	entation of planner of graphs, Edge neorems  entation of graphs, as, Hall's 'marriage'  roblem, Distances in Floyd — Warshall	6
III IV	C P g G C C th G G T g G A S T K	ut sets, connlanner graphs raphs, detectiolouring of graphs decreased and its raph Algorith ravelling sales raphs, Shorte lgorithm, Bell panning Tree rees, Spannin ruskal's algorithm r	ectivity and sepands, Kuratowski's two of Planarity, aphs, The four-color ph and Matrix repos, Hamiltonian cyclor, Weighted graphs, application hm:  Is man's problem & strong path and Dijleman-Ford Algorith and Dijleman-Ford Algorith and Independence in graphs, ithm, Independence	Vertex Colouring ur and five-colour the resentation: es, Matrix represent Matching's in graph Chinese postman prostra's algorithm, m	entation of planner of graphs, Edge neorems  entation of graphs, as, Hall's 'marriage'  roblem, Distances in Floyd — Warshall	7
III IV V	C P gr C C th G T gr A S S T K A	ut sets, conn lanner graphs raphs, detection olouring of graphs, designed Grapulerian Graphs, deorem and its raph Algorith ravelling sales raphs, Shorte lgorithm, Bell panning Tree rees, Spanning ruskal's algorithms of polications of	ectivity and separate, Kuratowski's two of Planarity, aphs, The four-color ph and Matrix reps, Hamiltonian cycle, Weighted graphs, application hm: sman's problem & st path and Dijkman-Ford Algorith: ag tree in graphs, ithm, Independence of Graph Thoery:	Vertex Colouring ur and five-colour the oresentation: es, Matrix represent Matching's in graph Chinese postman prostra's algorithm, m  Minimum spannice sets and covering in the oreset	entation of planner of graphs, Edge neorems  eation of graphs, ns, Hall's 'marriage'  roblem, Distances in Floyd — Warshall  ng tree algorithms, n graphs	7 7
III IV	C P gg C C th G G T gg A S J T K K A P c	ut sets, connlanner graphs raphs, detectiolouring of graphs designed Graphs decrement and its raph Algorith ravelling sales raphs, Shorte lgorithm, Bell panning Tree rees, Spannin ruskal's algorithms of erfect Graphs	ectivity and separate, Kuratowski's two of Planarity, aphs, The four-color ph and Matrix reps, Hamiltonian cycle, Weighted graphs, application hm:  sman's problem & st path and Dijl man-Ford Algorith:  ig tree in graphs, ithm, Independence of Graph Thoery:  Applications of	Vertex Colouring ur and five-colour the oresentation: es, Matrix represent Matching's in graph Chinese postman prostra's algorithm, m  Minimum spannice sets and covering in the oreset	entation of planner of graphs, Edge neorems  entation of graphs, as, Hall's 'marriage'  roblem, Distances in Floyd — Warshall	7
III IV V	C P gg C C th G G T gg A S J T K K A P c	ut sets, conn lanner graphs raphs, detection olouring of graphs, designed Grapulerian Graphs, deorem and its raph Algorith ravelling sales raphs, Shorte lgorithm, Bell panning Tree rees, Spanning ruskal's algorithms of polications of	ectivity and separate, Kuratowski's two of Planarity, aphs, The four-color ph and Matrix reps, Hamiltonian cycle, Weighted graphs, application hm:  sman's problem & st path and Dijl man-Ford Algorith:  ig tree in graphs, ithm, Independence of Graph Thoery:  Applications of	Vertex Colouring ur and five-colour the oresentation: es, Matrix represent Matching's in graph Chinese postman prostra's algorithm, m  Minimum spannice sets and covering in the oreset	entation of planner of graphs, Edge neorems  eation of graphs, ns, Hall's 'marriage'  roblem, Distances in Floyd — Warshall  ng tree algorithms, n graphs	7 7
III IV V	C P gg C C th G G T gg A S J T K K A P c	ut sets, connlanner graphs raphs, detectiolouring of graphs designed Graphs decrement and its raph Algorith ravelling sales raphs, Shorte lgorithm, Bell panning Tree rees, Spannin ruskal's algorithms of erfect Graphs	ectivity and sepants, Kuratowski's two of Planarity, aphs, The four-color ph and Matrix reps, Hamiltonian cycle, Weighted graphs, application hm:  Is man's problem & st path and Dijleman-Ford Algorith:  It get ree in graphs, ithm, Independence of Graph Thoery:  Applications of graphs)	Vertex Colouring ur and five-colour the resentation: es, Matrix represent Matching's in graph Chinese postman prostra's algorithm, m Minimum spanning sets and covering in graphs in switching	entation of planner of graphs, Edge neorems  eation of graphs, ns, Hall's 'marriage'  roblem, Distances in Floyd — Warshall  ng tree algorithms, n graphs	6 7 7
III  IV  V  VI	C P gg C C th G C T gg A A S P G G	ut sets, connlanner graphs raphs, detectiolouring of graphs, deighted Grapulerian Graphs, hordal graphs, ecorem and its raph Algorith ravelling sales raphs, Shorte lgorithm, Bell panning Tree rees, Spanning truskal's algorithm polications of erfect Graphs, raphs (or Digraphs (or Digraphs)	ectivity and sepants, Kuratowski's two of Planarity, aphs, The four-color ph and Matrix reps, Hamiltonian cycle, Weighted graphs, application hm: Is man's problem & st path and Dijleman-Ford Algorith: It is get ree in graphs, ithm, Independence of Graph Thoery: It is Applications of the state of Graph Thoery: It is a state of the state of Graph Thoery: It is a state of the state of Graph Thoery: It is a state of the s	Vertex Colouring ur and five-colour the resentation: es, Matrix represent Matching's in graph Chinese postman prostra's algorithm, m Minimum spanning sets and covering in graphs in switching	entation of planner of graphs, Edge neorems  entation of graphs, as, Hall's 'marriage'  roblem, Distances in Floyd — Warshall ang tree algorithms, an graphs g theory, Directed	6 7 7 6
III IV V	C P g G C C C C C C C C C C C C C C C C C C	ut sets, connlanner graphs raphs, detectiolouring of graphs, deighted Grapulerian Graphs, hordal graphs, ecorem and its raph Algorith ravelling sales raphs, Shorte lgorithm, Bell panning Tree rees, Spanning truskal's algorithm polications of erfect Graphs, raphs (or Digraphs (or Digraphs)	ectivity and sepants, Kuratowski's two of Planarity, aphs, The four-color ph and Matrix reps, Hamiltonian cycles, Weighted graphs, application hm: Is man's problem & st path and Dijleman-Ford Algorith: In the general graphs, ithm, Independence of Graph Thoery: In Applications of the path of the path and Dijleman-Ford Algorith the general graphs, ithm, Independence of Graph Thoery: In the path of the	Vertex Colouring ur and five-colour the resentation: es, Matrix represent Matching's in graph Chinese postman prostra's algorithm, m Minimum spanning sets and covering in graphs in switching	entation of planner of graphs, Edge neorems  eation of graphs, ns, Hall's 'marriage'  roblem, Distances in Floyd — Warshall  ng tree algorithms, n graphs	6 7 7 6

	References
1	Parthasarathy K. R., "Basic Graph Theory", McGraw-Hill Professional Publishing, 3 rd Edition, 1994
	Useful Links
1	Module I, II, III, IV, V, VI https://onlinecourses.swayam2.ac.in/cec20_ma03/preview

	THE PERSON NAMED IN COLUMN 1			P	rograi	CO-l nme C					-			PSO	
\$5000000000000000000000000000000000000	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1	3		1						***************************************				2		
CO2			2							4					<u> </u>
CO3	2	1								-			***************************************	1	

## Assessment

Assessm	ent Plan based	on Bloom's Taxon	omy Level	
Bloom's Taxonomy Level	<b>T1</b>	T2	ESE	Total
Remember	Not Allowed	Not Allowed	Not Allowed	Not Allowed
Understand	5	5	10	20
Apply	10	5	15	30
Analyze	. 5	5	15	25
Evaluate		5	15	20
Create			5	5
Total	20	20	60	100

			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	lided Autonomous I <b>AY 2021-22</b>	IWILLUIC J	
				rse Information		
rogr	amme		B.Tech. (Informa			
	Seme		Third Year B. Te			
***************************************	e Cod		5IT314		AND RESERVED TO A RESERVED BY A SAME OF THE PARTY OF THE	ng mangaph a lagu shiperson ng 273 m ( a 1000 da da 11111000 k 11111000 111111000 11111111000 11111111
	e Nan			tive _ 1: Fundamen	tals of Artificial Intellige	ence
	······································	uisites:		Probability and Line		
/C311 C	u ixcy	uisius.	Dasie Course IX	COLUMN CO	our ringooru	The second section of the secti
Т	eachin	g Scheme		Examination	Scheme (Marks)	
ectu	****	3 Hrs/week	<b>T1</b>	<b>T2</b>	ESE	Total
utor	ial	-	20	20	60	100
racti	cal				A Agricultural Completion (1974) at a graph of the agricultural and an additional and a second and addition and a second learned for the agricultural and a	
ntera	ction	***		Cre	edits: 3	
			sopeday volumentees are properly proper a resource of the second			
New Year				urse Objectives		
1				es in Artificial Inte		
2					Artificial Intelligence	
3	To e			s in Artificial Intell		
		AND A CANCELLA CONTRACTOR OF THE CONTRACTOR OF T	and the second s	O) with Bloom's T	axonomy Level	
			students will be ab			
CO1			concepts of Artific			Apply
CO2	Com	pare the archite	ectural and function	al structures of Art	tificial Intelligence	Analyse
CO3	Buile	d an expert syst	em in Artificial Int	elligence		Create
Aodu	ile		Modu	ile Contents		Hours
		I and Problen	n Solving by Searc	h		
I					e search, Uninformed	7
			search, CSP probl			
II		knowledge Rep				7
11				ntation, First order	logic-I	
	k	Knowledge Rea	coninc			
Ш	F	irst order logic		st order logic-I, Bay	ysian network, decision	6
Ш	F n	irst order logic etwork		st order logic-I, Bay	ysian network, decision	6
	F n	irst order logic etwork lanning	-II, Inference in Fir			oversk kritisk formaldere forskering bester for the second section of the second secon
III	F n P Is	irst order logic etwork lanning atroduction to	-II, Inference in Fir		Planning graph and	6
	F n P In	irst order logic etwork Planning atroduction to Graphplan	-II, Inference in Fir Planning, Plan			oversk krista i Kristinia sing plantasi i Arvinia krista krista prima krista krista krista krista krista krist
IV	F n P Li	irst order logic etwork Planning atroduction to Graphplan Aachine Learn	-II, Inference in Fir Planning, Plan ing	space planning,	Planning graph and	oversk kritisk konstruktiva kontantari oʻrshina ayrildi oʻrshin sistemin shirildi.
***************************************	F n F Li	irst order logic etwork  Planning of the controduction to braphplan  Tachine Learn of the controduction to the controduction to	-II, Inference in Fir Planning, Plan ing ML , Learning	space planning, decision tress, Re	Planning graph and einforcement learning,	oversk kritisk formaldere forskering bester for the second section of the second secon
IV	F n P Li C C N Li L	irst order logic etwork Planning atroduction to Graphplan Aachine Learn atroduction to earning in neuroduction in neuroduction to earning in neuroduction.	-II, Inference in Fir Planning, Plan  ing ML, Learning ral network, Deep I	space planning,	Planning graph and einforcement learning,	. 6
IV V	F n P I I C C N I I I I I I I I I I I I I I I	irst order logic etwork lanning atroduction to braphplan lachine Learn atroduction to earning in neurocupants systems	-II, Inference in Fir Planning, Plan  ing  ML, Learning ral network, Deep L	space planning, decision tress, Recearning: A review.	Planning graph and einforcement learning,	. 6
IV	F n P II C N II I	irst order logic etwork Planning atroduction to braphplan Tachine Learn atroduction to earning in neuroxpert systems atroduction, Fu	Planning, Plan  ing  ML , Learning ral network, Deep I	space planning, decision tress, Recearning: A review.	Planning graph and einforcement learning,	6
IV V	F n P II C N II I	irst order logic etwork lanning atroduction to braphplan lachine Learn atroduction to earning in neurocupants systems	Planning, Plan  ing  ML , Learning ral network, Deep I	space planning, decision tress, Recearning: A review.	Planning graph and einforcement learning,	7
IV V	F n P II C N II I	irst order logic etwork Planning atroduction to braphplan Tachine Learn atroduction to earning in neuroxpert systems atroduction, Fu	Planning, Plan  ing  ML , Learning ral network, Deep I	space planning, decision tress, Recearning: A review.	Planning graph and einforcement learning,	7
IV V VI	F n n I i i i i i i i i i i i i i i i i i	rirst order logic etwork Planning atroduction to Graphplan Machine Learn atroduction to earning in neur expert systems atroduction, Fu ES, Building an	-II, Inference in Fir Planning, Plan ing ML, Learning ral network, Deep I unctionality /compo	space planning, decision tress, Recearning: A review. onents of Expert sy	Planning graph and einforcement learning, estems, Architecture of	6 7 6
IV V VI	Find Property of the second se	irst order logic etwork lanning atroduction to braphplan lachine Learn atroduction to earning in neur expert systems atroduction, Fundaments, Building an Elaine and Keiner etwork et and Keiner etwork et and Keiner etwork etwor	Planning, Plan  Ing  ML , Learning ral network, Deep L  Inctionality /compo	space planning, decision tress, Recearning: A review. onents of Expert sy  Text Books 'Artificial Intelligen	Planning graph and einforcement learning, estems, Architecture of mce", McGraw Hills 3 rd e	6 7 6
IV V VI	F n P I I I I I I I I I I I I I I I I I I	irst order logic etwork Planning atroduction to braphplan Machine Learn atroduction to earning in neuroxert systems atroduction, Furnity S., Building an Elaine and Keikiraman et al.,	Planning, Plan  Ing  ML , Learning ral network, Deep L  Inctionality /compo	space planning, decision tress, Recearning: A review. onents of Expert sy  Text Books 'Artificial Intelligen	Planning graph and einforcement learning, estems, Architecture of	6 7 6
IV V VI	F n P I I I I I I I I I I I I I I I I I I	irst order logic etwork lanning atroduction to braphplan lachine Learn atroduction to earning in neur expert systems atroduction, Fundaments, Building an Elaine and Keiner etwork et and Keiner etwork et and Keiner etwork etwor	Planning, Plan  Ing  ML , Learning ral network, Deep L  Inctionality /compo	space planning, decision tress, Recearning: A review. onents of Expert sy  Text Books 'Artificial Intelligence	Planning graph and einforcement learning, estems, Architecture of mce", McGraw Hills 3 rd e	6 7 6
IV V VI	Find Property of the second se	rirst order logic etwork Planning Introduction to Graphplan Machine Learn Introduction to earning in neurological in neurological in the earning in neurological in the earning in second in the earning in neurological in the earning in the ea	Planning, Plan  ing  ML , Learning  ral network, Deep I  metionality /compo Expert system  lvin Knight ,Nair, ' "Foundations of Ar	space planning, decision tress, Recearning: A review. onents of Expert sy  Text Books 'Artificial Intelligentificial Intelligence  References	Planning graph and einforcement learning, estems, Architecture of mce", McGraw Hills 3 rd of and Expert Systems", M	6 7 6 edition,1991 [acmilan India
IV V VI	Rich Jana Ltd.,	irst order logic etwork Planning atroduction to braphplan Plachine Learn atroduction to earning in neur expert systems atroduction, Furst, Building an Elaine and Keikiraman et al., 2007.	Planning, Plan  ing  ML , Learning  ral network, Deep I  metionality /compo Expert system  lvin Knight ,Nair, ' "Foundations of Ar	space planning, decision tress, Recearning: A review. onents of Expert sy  Text Books 'Artificial Intelligentificial Intelligence  References	Planning graph and einforcement learning, estems, Architecture of mce", McGraw Hills 3 rd e	6 7 6 edition,1991 [acmilan India
V VI 1 2	Rich Jana Ltd.,	irst order logic etwork Planning Archine Learn Archine Learn Archine Learn Archine in neur Axpert systems Atroduction, Fu S, Building an Elaine and Ke kiraman et al., 2007. ell and Norvig, on).	Planning, Plan  ing  ML , Learning ral network, Deep I  metionality /compo Expert system  lvin Knight ,Nair, ' "Foundations of Ar " Artificial Intelligation	space planning,  decision tress, Re Learning: A review.  onents of Expert sy  Text Books  Artificial Intelligence tificial Intelligence  References  ence — A Modern Ap	Planning graph and einforcement learning, stems, Architecture of stems, McGraw Hills 3 rd of and Expert Systems", McGraw Frentice-Hall,	6 7 6 edition,1991 [acmilan India]
IV V VI 1 2	Rich Jana Ltd.,	irst order logic etwork Planning arroduction to Graphplan Machine Learn arroduction to earning in neur expert systems arroduction, Fus, Building an Elaine and Keikiraman et al., 2007.  ell and Norvig, on). Shyamanta M	Planning, Plan  ing  ML , Learning ral network, Deep I  metionality /compo Expert system  lvin Knight ,Nair, ' "Foundations of Ar " Artificial Intelligation	space planning,  decision tress, Re Learning: A review.  onents of Expert sy  Text Books  Artificial Intelligence tificial Intelligence  References  ence — A Modern Ap	Planning graph and einforcement learning, estems, Architecture of mce", McGraw Hills 3 rd of and Expert Systems", M	6 7 6 edition,1991 [acmilan India]

1	Module I,II,III https://onlinecourses.nptel.ac.in/noc19_me71/unit?unit=7&lesson=8
2	Module IV,V https://onlinecourses.nptel.ac.in/noc19_me71/unit?unit=16&lesson=17
3	Module VI Vlabs jith ac in

						CO-I	PO Ma	apping					na (U.S.)		
				P	rogran	nme C	utcon	ies (PC	<b>D</b> )					<b>PSO</b>	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1	1		2										2		
CO2			3		A Million and on the Million and an analysis of the publishment of the										**************************************
CO3	2													3	

#### Assessment

Bloom's Taxonomy Level	T1	Т2	ESE	Total
Remember	Not Allowed	Not Allowed	Not Allowed	Not Allowed
Understand	5	5	10	20
Apply	10	5	15	30
Analyze	5	5	15	25
Evaluate		5	15	20
Create			5	5
Total	20	20	60	100

	and the companion and Marines (Miller (Miller (Miller) Miller) (Miller (Miller) Miller) (Miller) (Mill	Jovernment	Aided Autonomous I AY 2021-22		
		Con	rse Information		
Programr	ne		nation Technology)		
Class, Sen	***************************************	Third Year B. T			
Course C	MATERIAL CONTROL OF THE PERSON CONTROL	517315	The second secon		
Course N			ective - 1: Soft Con	nputing	unicania etti ola assinta periodolo di erribbio, billio tra Paladolo di Ptirolo
	equisites:	·	igence, Tool like M		
Action to the Confession of th		and the comment of the annual state of the comment	The second se		
Teach	ing Scheme		Examination	Scheme (Marks)	and and a state of the state of
Lecture	3 Hrs/week	T1	T2	ESE	Total
<b>Cutorial</b>	-	20	20	60	100
Practical	_				
nteractio	n		Cro	edits: 3	
	• • •		urse Objectives		
		is component of s			
				and optimization problem	ns.
3   To		the swarm intelli	The contract of the contract o		
41			O) with Bloom's T	axonomy Level	
		e students will be			Analyze
		oft computing cor ng of swarm intel			Analyze
			for given problem		Evaluate
CO3 Ju	sury the soft com	puting technique	tor given problem		Dvardate
	Introduction History, Scope		odule Contents  ng, components of	Soft Computing- Neural	Hours
Module I	History, Scope Networks, App Swarm Intellige	of Soft Compution lication scope of nce, Hybrid System	ng, components of f ANN, Fuzzy Lo em, Hard vs. Soft C	ogic, Genetic algorithm,	5
	History, Scope Networks, App Swarm Intellige Artificial Neur: Fundamental Comportant term separability, A	of Soft Computing lication scope of the concept of the concept, Evolution of the concept, Evolution of the concept, Exor of AND,OR, EXOR	ng, components of of ANN, Fuzzy Lo em, Hard vs. Soft C N) of Neural network ANN, Mc-Culloch problem solving	ogic, Genetic algorithm,	5
I	History, Scope Networks, App Swarm Intellige Artificial Neura Fundamental Co important term separability, A Learning, Unsu problem. Genetic Algoric Introduction, ba Selection, crosse vs. Genetic alge the schema theo	of Soft Computing lication scope of some of scope of scope of the scop	ng, components of f ANN, Fuzzy Loem, Hard vs. Soft CN) n of Neural network ANN, Mc-Culloch problem solving ing, Application to the Terminologies in n and mutation – fit enetic algorithm, go	ogic, Genetic algorithm, computing. c, Basic models of ANN, Pitts Neuron, Linear by ANN, Supervised	4
I	History, Scope Networks, App Swarm Intellige Artificial Neur: Fundamental Co important term separability, A Learning, Unsu problem. Genetic Algori Introduction, ba Selection, cross vs. Genetic algo the schema theo to GA to real wo Introduction, Cl	of Soft Computing lication scope of the scop	ng, components of f ANN, Fuzzy Loem, Hard vs. Soft CN) n of Neural network ANN, Mc-Culloch problem solving ing, Application to and mutation – fit enetic algorithm, go on of GA, Genetic problem set) Fuzzy sets an	ogic, Genetic algorithm, computing.  c, Basic models of ANN, Pitts Neuron, Linear by ANN, Supervised to ANN to real world.  GA, Genetic operators—tness function, traditional general genetic algorithm,	4
I	History, Scope Networks, App Swarm Intellige Artificial Neur: Fundamental Co important term separability, A Learning, Unsu problem. Genetic Algori Introduction, ba Selection, crosse vs. Genetic algorithe schema theo to GA to real wo Introduction to Introduction, Cl models, Membe real world probl Swarm Intellig Ant colony of Harmony search	of Soft Computing lication scope of some of scope of scope of the scop	ng, components of f ANN, Fuzzy Loem, Hard vs. Soft CN) n of Neural network ANN, Mc-Culloch problem solving ing, Application to the Terminologies in and mutation – fit enetic algorithm, go on of GA, Genetic problem set) Fuzzy sets and efuzzification. App	ogic, Genetic algorithm, computing.  c, Basic models of ANN, Pitts Neuron, Linear by ANN, Supervised to ANN to real world.  GA, Genetic operators—tness function, traditional eneral genetic algorithm, rogramming. Application d their properties, Fuzzy	4

1	Jyh-Shing Roger Jang, Chuen-Tsai Sun, and Eiji Mizutani "Neuro Fuzzy and Soft computing: A Computational Approach to Learning and Machine Intelligence", Prentice Hall, New Delhi, 1986.
2	Goldberg, David E, "Genetic Algorithms in Search, Optimization and Machine Learning", Addison Wesley, New Delhi, 1989.
3	Sivanandam S N and Deepa S N, "Principles of Soft computing", Wiley India Edition., 2008.
	References
1	Timothy J. Ross, "Fuzzy Logic with Engineering Application", Tata McGraw Hill, New Delhi, 2004.
2	Robert J Schalkff, "Artificial Neural Networks", McGraw Hill, New Delhi, 1997.
3	Sivanandam S N and Deepa S N," Introduction to Genetic algorithms", Springer Verlag, Heidelberg, 2008.
	Useful Links
<del></del>	https://onlinecourses.nptel.ac.in/noc21_cs11/preview (Week no 1,2,3,4,5,8)
1	Or
	https://nptel.ac.in/courses/106/105/106105173/ (Week no 1,2,3,4,5,8)
2	https://www.urbanpro.com/online-class/cs-302-new-soft-computing/1794165

						CO-1	PO Ma	apping	AND A					
				P	rograi	nme O	utcon	aes (PC	<b>)</b>				PS	O
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	2					77.7 7.1 7.1 7.1 7.1 7.1 7.1 7.1 7.1 7.1						7 A F A F A F A F A F A F A F A F A F A		
CO2		2		2		en mann er denning den kritisken in der	f-4		1		******************************			
CO3			1		3			<u> </u>	<u> </u>	<u></u>				1

## **Assessment**

Bloom's Taxonomy Level	T1	T2	ESE	Total
Remember	Not Allowed	Not Allowed	Not Allowed	Not Allowed
Understand	5	5	10	20
Apply	10	5	15	30
Analyze	5	5	15	25
Evaluate	And of Printed and the Second of A 400, districted in the control on physical delicity delicity and in Arganization	5	15	20
Create		Annual Mark Palmoner and one of all the transfer of the transf	5	5
Total	20	20	60	100

				llege of Engineer			
		there of the sections below to the continue of	(Government	Aided Autonomou	is Institute)		
			ζ_	AY 2021-22			
D	3 PA PA A	A. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.		urse Information mation Technolog			
Progra					<u></u>	paperson, johns, je procije vije salje dra sammen i	
***************************************	Semester e Code		Third Year B.			Market Control of the	
	e Code e Name		5 IT3		anagement, Protection	and G	oxiornonco
	e Name d Requisites		FIOIESSIONAL E	icciive - 1.Data ivi	lanagement, Frotection	anu O	Overnance
********	aching Sche			1	on Scheme (Marks)	<u> </u>	
Lectur		/week	T1	T2	ESE		Total
Tutori		-	20	20	60		100
Practi		-		en e			
Intera	ction				Credits: 3		
i i i i i i i i i i i i i i i i i i i						प्रमुख्या स्टा	
-	T			ourse Objectives			
1				ata life cycle mana			and an action of the second of
2					ability, data protection		
3	l o provide				chitectures data protec	uon	
	1 - 6 4	A CONTRACTOR OF THE PARTY OF			Taxonomy Level		
**************************************			e students will be				A 1
CO1				iance and governa			Apply
CO2	<u> </u>			reats to ensure dat		١	Analyze
CO3			sive enterprise a	applications and	industry standards in	data	Create
	managemen	L					
Modu	la	CHARLES Y	M	odule Contents			Hours
MANA		ction to		management (DI	.M	18/10/2018/04/2018	HVUIS
					involved- Volume of	data	
I					for access, Stages of		4
					lestruction, Risks invo		•
			enefits, best prac		and		
		***************	nd data availabi	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			ana, a la sala ya marani na mangana na kana a ka gana kumuna, da da kana kiliku manda m
					Solid State Devices (S	SSD),	
					ct, Data center End to		
	1		•		rage, network, host, cl	1	
	applicati	ions, v	rirtual machine	s, cloud storag	e, Storage virtualiz	ation	
II	technolo	gies - I	RAID level, stor	age pooling, stor	age provisioning, Adv	ance	8
Π	topics i	n stora	ge virtualization	ı – storage prov	risioning, thinprovisio	ning,	0
					Availability-Introducti		
					ccess, Disaster Recov		
					global cluster, wide-		
				lit-brain – probler	n and solutions o Prep	aring	
	for DR -						
	1		data protection				
	l .		-		back-up/restore, Snap	1	
					(cloning, DevOps),		
III					- LTR, Archival, D		8
	1				cture, Backup v/s Arcl	1	
					sks, cloud), challenges	with	
	new edg	e techno	ology (cloud, cor	ntainers)			

***********************		
IV	Data Threats and Data center security  Type of Threats-Denial of Service (DoS), man in the middle attacks, Unintentional data loss, Repudiation, Malicious attacks to steal data, Understanding, Identification and Threat modelling tools, Introduction to Ransomware, Security- Authorization and authentication - access control, Transport Layer Security (TLS), key management, security in cloud, Design and architecture considerations for security	7
V	Data regulation, compliance and governance Regulations requirements and Privacy Regulations-General Data Protection Regulation (GDPR), The Health Insurance Portability and Privacy Act of 1996 (HIPPA), PII (Personal Identity Information), Information Governance- Auditing, Legal Hold, Data classification and tagging (Natural Language Processing)	5
VI	Applications uninterrupted  Understand data management aspects of traditional and new edge applications, Reference architecture/best practices (pick 2-3 case studies from below topics). Transactional Detabases (Orgale Massor)	7
	Text Books	
1	Robert Spalding, "Storage Networks: The complete Reference" Tata McGraw-Hill,	2017
2	Vic (J.R.) Winkler, "Securing The Cloud: Cloud Computing Security Techniques a (Syngress/Elsevier) - 978-1-59749-592-9, 2017	and Tactics"
3	TBD – online reference for each topic.	
	References	
1	O'Reilly, Martin Kleppmann, "Designing Data-Intensive Applications" 2012	TO COMPANY OF THE STATE OF THE
2	TBD: provide more online material details and books (This can include son available white-paper, solution guides etc.)	ne publicly
	Useful Links	
1	https://www.enterprisestorageforum.com/storage-hardware/storage-virtualization.h	tml
*****************	https://searchstorage.techtarget.com/definition/data-life-cycle-management	
MATERIAL PROPERTY OF THE PROPERTY.	https://www.hitechnectar.com/blogs/three-goals-data-lifecycle-management/	

				P	rograi	nme C	Outcon	nes (PC	<b>)</b> )					<b>PSO</b>	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1	3				and the third and the second standard account, it,	*****************	***************************************				~~~		3		
CO2	3	2		A THE CONTRACTOR OF THE MARKET AND A										3	
CO3		3			to Nan-Austracian I for quintermone										

## Assessment

Assessment Pla	ın based on Blooi	n's Taxonomy I	Level (Marks)	
Bloom's Taxonomy Level	<b>T1</b>	Т2	ESE	Total
Remember	Not Allowed	Not Allowed	Not Allowed	Not Allowed
Understand	5	5	10	20
Apply	10	5	15	30
Analyze	5	5	15	25
Evaluate		5	15	20
Create			5	5
Total	20	20	60	100

			AY 2021-22	The state of the s	The state of the s
		Cou	ırse Information		
Programi	ne	B.Tech. (Informa	ation Technology)	a kanada kanada da pada menada da pada da bahasa bahasa bahasa pakan ana menada kanada sa bahasa bahasa pada	anaman tamining tamining be seed to be a fact of the seed of the s
Class, Sei	nester	Third Year B. Te			
Course C	ode	5013 389			halankana (mon) kanalah ang mammu menengganangan sanggan sanggan
Course N	ame		1: Joy of Programming u	ising Python	etti antii 17-a Pilla ettimin aanaini tai ja tai kyppiga elepiyiy kay oo kiyay 1900 kiya
Desired R	equisites:	Computer Progra		N # 5-700 W bird Front branch and a state of the state of	Constitution of the State of th
***************************************					
Teacl	ing Scheme		Examination Sch	eme (Marks)	
Lecture	2 Hrs/week	T1	T2	ESE	Total
Cutorial		20	20	60	100
Practical			A V	<b>UU</b>	100
nteractio		The state of the s	Credits	1444	
HICI ACHO	La company of the second of th		Creatis	: 4	THE PROPERTY AND PARTY AND A STATE OF THE PARTY AND A A STATE AND
1 T-		THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS O	urse Objectives		
		nificance of Pythor			THE RESIDENCE OF THE PARTY OF T
		programming para ent libraries of Pyt			
J 10			non O) with Bloom's Taxon	aTarat	
t the end		students will be at		iomy Level	
	***************************************	amming concepts			Apply
		ing python progran			Evaluat
		sing Python librari		MCCORD CO CHEACH I AND AND COLD TO SHAPE AND	Create
en e	CONTRACTOR OF THE STATE OF THE	The second secon			
			of Bankel Administration of the Control of the Cont	And the state of t	
Module		Mod	dule Contents		Hours
Module	Introduction to		dule Contents		Hours
	Introduction to The basic elemen	Python:		ol Structures, Strings	
Module I	The basic element	Python: nts of python, Bran	nching Programs, Contr		
	The basic element and Input, Iterat	Python: nts of python, Bran			
	The basic element and Input, Iterat variables.	Python: nts of python, Brantion, Functions and	nching Programs, Contr		
I	The basic element and Input, Iterat variables.  Advanced feature	Python: nts of python, Brantion, Functions and res of Python:	nching Programs, Contr d scoping, Specification	s, Recursion, Global	4
	The basic element and Input, Iterat variables.  Advanced feature Modules, Files,	Python: nts of python, Brandion, Functions and res of Python: System Functions	nching Programs, Contr d scoping, Specification and Parameters, String	s, Recursion, Global	4
I	The basic element and Input, Iterat variables.  Advanced feature Modules, Files, Dictionaries, List	Python: nts of python, Brandion, Functions and res of Python: System Functions ts and Mutability, I	nching Programs, Control scoping, Specification and Parameters, String Functions as Objects.	s, Recursion, Global	4
I	The basic element and Input, Iterat variables.  Advanced feature Modules, Files, Dictionaries, List Classes and Obj	Python: nts of python, Brancion, Functions and res of Python: System Functions ts and Mutability, F lect-Oriented Prog	nching Programs, Control scoping, Specification and Parameters, String Functions as Objects.	s, Recursion, Global	5
I	The basic element and Input, Iterat variables.  Advanced feature Modules, Files, Dictionaries, List Classes and Obj Abstract Data Type Telephone (Classes and Obj Abstract Data Type Type Telephone)	Python: nts of python, Brancion, Functions and res of Python: System Functions ts and Mutability, F lect-Oriented Prog	nching Programs, Control scoping, Specification and Parameters, String Functions as Objects.	s, Recursion, Global	5
II	The basic element and Input, Iterat variables.  Advanced feature Modules, Files, Dictionaries, List Classes and Obj Abstract Data Ty Hiding.	Python: nts of python, Brancion, Functions and res of Python: System Functions ts and Mutability, F lect-Oriented Prog	nching Programs, Control scoping, Specification and Parameters, String Functions as Objects.	s, Recursion, Global	5
I	The basic element and Input, Iterat variables.  Advanced feature Modules, Files, Dictionaries, List Classes and Obj Abstract Data Ty Hiding.  Module:	Python: nts of python, Brancion, Functions and res of Python: System Functions ts and Mutability, Fiect-Oriented Prog ypes and Classes,	nching Programs, Control scoping, Specification and Parameters, String Functions as Objects.  gramming: Inheritance, Encapsula	s, Recursion, Global gs, Tuples, Lists and tion and Information	5 4
I II III	The basic element and Input, Iterat variables.  Advanced feature Modules, Files, Dictionaries, List Classes and Obj Abstract Data Ty Hiding.  Module: Importing mo	Python: nts of python, Brancion, Functions and res of Python: System Functions ts and Mutability, Fiect-Oriented Prog ypes and Classes,	nching Programs, Control scoping, Specification and Parameters, String Functions as Objects.  gramming: Inheritance, Encapsula	s, Recursion, Global	5 4
I	The basic element and Input, Iterat variables.  Advanced feature Modules, Files, Dictionaries, List Classes and Obj Abstract Data Ty Hiding.  Module: Importing mo Composition.	Python: nts of python, Brancion, Functions and res of Python: System Functions and Mutability, If ect-Oriented Programs ypes and Classes, dule, Math	nching Programs, Control scoping, Specification and Parameters, String Functions as Objects.  gramming: Inheritance, Encapsula	s, Recursion, Global gs, Tuples, Lists and tion and Information	5 4
I	The basic element and Input, Iterat variables.  Advanced feature Modules, Files, Dictionaries, List Classes and Obj Abstract Data Tyliding.  Module: Importing mo Composition.  Data Visualizati	Python: nts of python, Brancion, Functions and res of Python: System Functions ts and Mutability, I lect-Oriented Prog ypes and Classes, dule, Math I on:	nching Programs, Control scoping, Specification and Parameters, String Functions as Objects.  gramming: Inheritance, Encapsula module, Random	gs, Recursion, Global gs, Tuples, Lists and tion and Information module, Packages	5 4
I II III	The basic element and Input, Iterat variables.  Advanced feature Modules, Files, Dictionaries, List Classes and Obj Abstract Data Ty Hiding.  Module: Importing mo Composition.  Data Visualizati Matplot lib, Bar O	Python: nts of python, Brancion, Functions and res of Python: System Functions ts and Mutability, If ect-Oriented Prog ypes and Classes, dule, Math on: Graph, Pie Chart, E	nching Programs, Control scoping, Specification and Parameters, String Functions as Objects.  gramming: Inheritance, Encapsula	gs, Recursion, Global gs, Tuples, Lists and tion and Information module, Packages	5 4
I II III	The basic element and Input, Iterat variables.  Advanced feature Modules, Files, Dictionaries, Liste Classes and Obj Abstract Data Trading.  Module: Importing mo Composition.  Data Visualizati Matplot lib, Bar Or Python-Numpy	Python: nts of python, Brancion, Functions and res of Python: System Functions its and Mutability, If ect-Oriented Prog ypes and Classes, dule, Math on: Graph, Pie Chart, E Library	nching Programs, Control scoping, Specification and Parameters, String Functions as Objects.  gramming: Inheritance, Encapsula module, Random  Box plot, Histogram, Lin	ss, Recursion, Global gs, Tuples, Lists and tion and Information module, Packages e chart, Sub plot	5 4
I II III	The basic element and Input, Iterat variables.  Advanced feature Modules, Files, Dictionaries, List Classes and Obj Abstract Data Ty Hiding.  Module: Importing mo Composition.  Data Visualizati Matplot lib, Bar G Python-Numpy NumPy: Introduction	Python: nts of python, Brancion, Functions and res of Python: System Functions ts and Mutability, I rect-Oriented Prog ypes and Classes, dule, Math on: Graph, Pie Chart, E Library ction, Numpy array	nching Programs, Control scoping, Specification and Parameters, String Functions as Objects.  gramming: Inheritance, Encapsula module, Random	ss, Recursion, Global gs, Tuples, Lists and tion and Information module, Packages e chart, Sub plot	5 4
I III IV V	The basic element and Input, Iterat variables.  Advanced feature Modules, Files, Dictionaries, List Classes and Obj Abstract Data Trading.  Module: Importing mo Composition.  Data Visualizati Matplot lib, Bar Organizati Organizati Matplot lib, Bar Organizati Python-Numpy NumPy: Introduce Pandas Library:	Python: nts of python, Brancion, Functions and res of Python: System Functions ts and Mutability, I sect-Oriented Prog ypes and Classes, dule, Math on: Graph, Pie Chart, E Library ction, Numpy array	nching Programs, Control scoping, Specification and Parameters, String Functions as Objects.  gramming: Inheritance, Encapsula module, Random  Box plot, Histogram, Ling, Numpy array indexing	gs, Recursion, Global gs, Tuples, Lists and tion and Information module, Packages e chart, Sub plot g, Numpy operations.	5 4 4
I II IV	The basic element and Input, Iterat variables.  Advanced feature Modules, Files, Dictionaries, List Classes and Obj Abstract Data Trading.  Module: Importing mo Composition.  Data Visualizati Matplot lib, Bar Organizati Matplot lib, Bar Organizati MumPy: Introduct Pandas Library: Pandas: Series,	Python: nts of python, Brancion, Functions and res of Python: System Functions ts and Mutability, First Property gypes and Classes, dule, Math on: Graph, Pie Chart, E Library ction, Numpy array : Data frames, ma	nching Programs, Control scoping, Specification and Parameters, String Functions as Objects.  gramming: Inheritance, Encapsula module, Random  Box plot, Histogram, Ling, Numpy array indexing naging missing data, g	gs, Recursion, Global gs, Tuples, Lists and tion and Information module, Packages e chart, Sub plot g, Numpy operations.	5 4
I III IV V	The basic element and Input, Iterat variables.  Advanced feature Modules, Files, Dictionaries, List Classes and Obj Abstract Data Trading.  Module: Importing mo Composition.  Data Visualizati Matplot lib, Bar Organizati Matplot lib, Bar Organizati MumPy: Introduct Pandas Library: Pandas: Series,	Python: nts of python, Brancion, Functions and res of Python: System Functions ts and Mutability, I sect-Oriented Prog ypes and Classes, dule, Math on: Graph, Pie Chart, E Library ction, Numpy array	nching Programs, Control scoping, Specification and Parameters, String Functions as Objects.  gramming: Inheritance, Encapsula module, Random  Box plot, Histogram, Ling, Numpy array indexing naging missing data, g	gs, Recursion, Global gs, Tuples, Lists and tion and Information module, Packages e chart, Sub plot g, Numpy operations.	5 4
I III IV V	The basic element and Input, Iterat variables.  Advanced feature Modules, Files, Dictionaries, List Classes and Obj Abstract Data Trading.  Module: Importing mo Composition.  Data Visualizati Matplot lib, Bar Organizati Matplot lib, Bar Organizati MumPy: Introduct Pandas Library: Pandas: Series,	Python: nts of python, Brancion, Functions and res of Python: System Functions ts and Mutability, I sect-Oriented Prog ypes and Classes, dule, Math on: Graph, Pie Chart, E Library ction, Numpy array : Data frames, manerations, data inpu	nching Programs, Control scoping, Specification and Parameters, String Functions as Objects.  gramming: Inheritance, Encapsular module, Random  Box plot, Histogram, Ling, Numpy array indexing naging missing data, get and data output.	gs, Recursion, Global gs, Tuples, Lists and tion and Information module, Packages e chart, Sub plot g, Numpy operations.	5 4
I II III IV V VI VI	The basic element and Input, Iterat variables.  Advanced feature Modules, Files, Dictionaries, List Classes and Obj Abstract Data Ty Hiding.  Module: Importing mo Composition.  Data Visualizati Matplot lib, Bar Gentlement Python-Numpy NumPy: Introduce Pandas Library: Pandas: Series, concatenation, open	Python: nts of python, Brancion, Functions and res of Python: System Functions ts and Mutability, For the Programmer of Python: Graph, Pie Chart, Elibrary ction, Numpy array Data frames, managerations, data input	nching Programs, Control scoping, Specification and Parameters, String Functions as Objects.  gramming: Inheritance, Encapsula module, Random  Box plot, Histogram, Ling, Numpy array indexing naging missing data, g	ss, Recursion, Global gs, Tuples, Lists and tion and Information module, Packages e chart, Sub plot g, Numpy operations. groupby, merging &	4 5 4 4 4 4

1	Barry, Paul, Head First Python, O Rielly,2nd Edition, 2010
2	Lutz, Mark, Learning Python, O Rielly, 4th Edition, 2009
	Useful Links
1	https://onlinecourses.nptel.ac.in/noc21_cs32/preview
2	https://docs.python.org/3/tutorial/
3	https://www.learnpython.org/

1 2 3 4 5 6 7 8 9 10 11 12 CO1 2	1	2
CO1 2		1
	3	
CO2 2 3 2 2		3

#### Assessment

Assessm	ent Plan based	on Bloom's Taxon	omy Level	
<b>Bloom's Taxonomy Level</b>	T1	Т2	ESE	Total
Remember	Not Allowed	Not Allowed	Not Allowed	Not Allowed
Understand	5	5	10	20
Apply	10	5	15	30
Analyze	5	5	15	25
Evaluate	THE RESIDENCE OF THE PROPERTY	5	15	20
Create			5	5
Total	20	20	60	100

			Walchand Col	ll <mark>ege of Engineerin</mark> g Aided Autonomous Ir	g, Sangli	To continue action action and appropriate action ac
*************************		end have the total accommendation as a commendation of the same and the same defined and the same and the sam	(Government 2	Ay 2021-22	istitute)	
			Car	AY 2021-22 urse Information		
Proor	amme			ation Technology)	THE PROPERTY OF THE PROPERTY O	
	, Seme		Third Year B. Te		et ver distant de commune en same in accessable quant quant parameter des quant per adoption (ARE) en relicibilité des départables de vers d'access	
	se Cod		501238			
	se Cou se Nan	-				
		ATTEMPTER CONTRACTOR SAFERING CONTRACTOR CON		2: Cloud Computing	System	
Desire	ea Keg	uisites:	Computer Netwo	orks	MANAGAMI AFAR CARAGO CONTROL CONTROL MILITARIA SALIMARIA DI REGIA COME A MILITARIA CARAGO CARAGO CONTROL CONTR	
Te	eachin	g Scheme		Examination S	Scheme (Marks)	
Lectu		3 Hrs/week	<b>T1</b>	T2	ESE	Total
Cutor	ial	-	20	20	60	100
racti	ical	_				
	ction	<u>i-</u>		Cred	lits: 3	
	M. Karlan (Managaran ang ang ang ang					Mindelphy (London Comment of Colonia Market (Colonia Colonia C
				urse Objectives		
1			nentals of virtualiza			
2				ent model in cloud c	omputing	AANAAA AA Filahaanaa Aanaa
3	To ex			ation in data center		
				O) with Bloom's Ta	xonomy Level	
	Acres		students will be al			
CO1			ndamentals of cloud			Understand
CO2			nodel to host servic			Apply
CO3	Com	pare various se	rvice models for da	ta center application	S	Analyze
I	S		ia Cioua Computin	g, Cloud Reference N	Model: IAAS, PAAS,	
	C	AAS, Cloud De loud, Cloud Pla	eployment Model: latforms in Industry	Public Cloud, Private	Model: IAAS, PAAS, Cloud and Hybrid	7
II	C V H A	AAS, Cloud Do loud, Cloud Place irtualization osted and Bapplication Virtualization	eployment Model: latforms in Industry are-Meta, Server ualization, Storage	Public Cloud, Private  Virtualization, Des	Model: IAAS, PAAS, Cloud and Hybrid  sktop Virtualization,	6
III	V H A N Pu	AAS, Cloud De loud, Cloud Place irtualization osted and Bapplication Virtuetwork Function blic Cloud Nefrastructure, Victoria De loud Nefrastructure, Victoria De lou	eployment Model: latforms in Industry are-Meta, Server ualization, Storage ons tworking: Route53	Public Cloud, Private Virtualization, Des Virtualization , Content Delivery Nuctions: Cloud Firewa	e Cloud and Hybrid sktop Virtualization, etworks, Resilience	
	C V H A N Pro In B: V V A	AAS, Cloud De loud, Cloud Pla irtualization osted and Bapplication Virtuetwork Functiublic Cloud Nefrastructure, Valancers, Intrusirtual Private PC fundamenta ccess Control I	eployment Model: latforms in Industry are-Meta, Server ualization, Storage tworking: Route53 irtual Network Function Detection System (VPC) als, Public and Privalst, Network Address, Network Address (VPC) als, Network Address (VPC)	Public Cloud, Private Virtualization, Des Virtualization , Content Delivery Nuctions: Cloud Firewa	e Cloud and Hybrid sktop Virtualization, etworks, Resilience	6
Ш	Property V	AAS, Cloud De loud, Cloud Pla irtualization osted and Bapplication Virtualization Virtualication Cloud Neufrastructure, Vialancers, Intrusirtual Private PC fundamenta ccess Control I loud Managen omputing, Resconturing, Rescontured I Rescontured	are-Meta, Server ualization, Storage ons tworking: Route53 irtual Network Funcion Detection System (VPC) als, Public and Privalent, Network Address, Network Address in Cloud Computer Management	Public Cloud, Private Virtualization, Des Virtualization , Content Delivery Nactions: Cloud Firewatems ate Subnets, Security ess Translation.	e Cloud and Hybrid sktop Virtualization, etworks, Resilience all, DNS, Load Groups, Network	6
III	C V H A A N Pro In B: V V A A C C A A C O O	AAS, Cloud De loud, Cloud Pla irtualization osted and Bapplication Virtuetwork Functiublic Cloud Neufrastructure, Valancers, Intrusirtual Private PC fundamenta ccess Control I loud Managemervice Managementing, Resodvances in Clopen Source and	are-Meta, Server ualization, Storage ons tworking: Route53 irtual Network Funcion Detection System (VPC) als, Public and Privalent, Network Address, Network Address our Cloud Computing	Public Cloud, Private Virtualization, Des Virtualization , Content Delivery Nactions: Cloud Firewatems ate Subnets, Security ess Translation.	e Cloud and Hybrid sktop Virtualization, etworks, Resilience all, DNS, Load Groups, Network ement in Cloud	6 7
III IV V	C V H A A N Pro In B: V V A A C C A A C O O	AAS, Cloud De loud, Cloud Pla irtualization osted and Bapplication Virtuetwork Functiublic Cloud Neufrastructure, Valancers, Intrusirtual Private PC fundamenta ccess Control I loud Managemervice Managementing, Resodvances in Clopen Source and	are-Meta, Server ualization, Storage ons tworking: Route53 irtual Network Function Detection System (VPC) als, Public and Privilist, Network Addrent ment in Cloud Computing Commercial Cloud g, Fog Computing	Public Cloud, Private Virtualization, Der Virtualization  , Content Delivery Nuctions: Cloud Firewatems  ate Subnets, Security ess Translation.  aputing, Data Manage in Cloud  ds, Cloud Simulator,	e Cloud and Hybrid sktop Virtualization, etworks, Resilience all, DNS, Load Groups, Network ement in Cloud	6 6 7
III IV V	C V H A A N Pro Inn Base V V A C C Sa C C C C Rajku	AAS, Cloud De loud, Cloud Pla irtualization osted and Bapplication Virtuetwork Functiublic Cloud Neufrastructure, Valancers, Intrus irtual Private PC fundamenta ccess Control I loud Managen ervice Manager omputing, Resodvances in Clopen Source and loud Computing mar Buyya, Camar Buyya, Cama	are-Meta, Server ualization, Storage tworking: Route53 irtual Network Function Detection System (VPC) als, Public and Privals, Network Addruent ment in Cloud Computing Commercial Clouds, Fog Computing	Public Cloud, Private Virtualization, Des Virtualization , Content Delivery Nuctions: Cloud Firewaters ate Subnets, Security ess Translation.  Aputing, Data Managerin Cloud ds, Cloud Simulator,  Text Books  1, S. Thamarai Selvi	e Cloud and Hybrid sktop Virtualization, etworks, Resilience all, DNS, Load Groups, Network ement in Cloud	6 6 7 7
III IV V VI	C V H A A N Pro Inn B: V V A A C C Se C C C C T A C O C C T T T T T T T T T T T T T T T T	AAS, Cloud De loud, Cloud Pla irtualization osted and Bapplication Virtuetwork Functiublic Cloud Neufrastructure, Vialancers, Intrusirtual Private PC fundamenta ccess Control I loud Managenervice Manageromputing, Resodvances in Clopen Source and loud Computing amar Buyya, Chill Education as Erl, Zaighan	are-Meta, Server ualization, Storage tworking: Route 53, irtual Network Funcion Detection System (VPC) als, Public and Privalist, Network Addruget ment in Cloud Computing Commercial Clouds, Fog Computing Christian Vecchiolan, 3rd Edition, 2011	Public Cloud, Private Virtualization, Des Virtualization  , Content Delivery N lections: Cloud Firewa ems  ate Subnets, Security ess Translation.  uputing, Data Manage in Cloud  ds, Cloud Simulator,  Text Books  L, S. Thamarai Selvi Ricardo Puttini, "Clo	e Cloud and Hybrid sktop Virtualization, etworks, Resilience all, DNS, Load Groups, Network ement in Cloud Research trend in	6 6 7 7 6 computing", M
III IV V VI	C V H A A N Pro Inn B: V V A A C C Se C C C C T A C O C C T T T T T T T T T T T T T T T T	AAS, Cloud De loud, Cloud Pla irtualization osted and Bapplication Virtuetwork Functiublic Cloud Neufrastructure, Vialancers, Intrusirtual Private PC fundamenta ccess Control I loud Managenervice Manageromputing, Resodvances in Clopen Source and loud Computing amar Buyya, Chill Education as Erl, Zaighan	are-Meta, Server ualization, Storage tworking: Route53, irtual Network Function Detection System (VPC) als, Public and Privalist, Network Addressed Clouds (VPC) als, Public and Privalist, Network Addressed Computing Commercial Clouds (Server) (Se	Public Cloud, Private Virtualization, Des Virtualization  , Content Delivery N lections: Cloud Firewa ems  ate Subnets, Security ess Translation.  uputing, Data Manage in Cloud  ds, Cloud Simulator,  Text Books  L, S. Thamarai Selvi Ricardo Puttini, "Clo	e Cloud and Hybrid sktop Virtualization, etworks, Resilience ell, DNS, Load Groups, Network ement in Cloud Research trend in	6 6 7 7 6 computing", M

2	Srinivasan, J. Suresh, "Cloud Computing: A practical approach for learning and implementation", Pearson, 2nd Edition, 2012
	Useful Links
1	Module: I, II, IV, V, VI https://nptel.ac.in/content/syllabus_pdf/106105167.pdf
2	https://aws.amazon.com/

				P	rograi	nme O	utcon	ies (PC	<b>D</b> )					<b>PSO</b>	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1	1		2										2		
CO2			3												
CO3	2			-										3	

#### Assessment

Bloom's Taxonomy Level	T1	T2	ESE	Total
Remember	Not Allowed	Not Allowed	Not Allowed	Not Allowed
Understand	5	5	10	20
Apply	10	5	15	30
Analyze	5	5	15	25
Evaluate		5	15	20
Create			5	5
Total	20	20	60	100

# TY Sem II

				College of Engineering					
			(Governmen	t Aided Autonomous AY 2021-22	INSTITUTE) 4 animan minimatan and animan kanan matana animan				
<u> </u>				ourse Information					
D	49, N. 36.0.		ALANDA SANTA S	mation Technology)					
Progra				Tech., Sem VI					
Class,			51132						
Course			Unix Operatin						
Course			Operating Syst			, y a			
Desire	a Keg	uisites:	Operating Syst						
Water Care	11.								
	·	g Scheme	77.1		n Scheme (Marks) ESE	Total			
Lectur		2 Hrs/week	T1	T2	60 ESE	Total 100			
Tutori		_	20	20		100			
Practio	~~~~~~~								
Interac	ction	_		C	redits: 2				
31.	A Seesa			<b>⇒</b>					
	<b>.</b>			Course Objectives	- M : OS				
1				nilosophy of the Unix	Linux US.				
2			ecture of Unix/L			***************************************			
3	Tod		em call of Linux	***************************************					
				(CO) with Bloom's	l'axonomy Level				
			students will be			Apply			
CO1			principal and philosophy of the Unix/Linux OS						
CO2 Analyze the architecture of Unix/Linux OS									
CO3	Com	pare various IP	Cs in Linux OS			Analyze			
						-			
Modu			<b>I</b> V	Iodule Contents		Hours			
I	C In	perating Systematroduction to t	m Services, Assu he KERNEL: A	w of the System - History, System Structure, User Perspective, in Services, Assumption About Hardware. he KERNEL: Architecture of UNIX OS, Introduction to system Data Structure, System Administration					
II	T B	he Buffer Cac Suffer headers,	he structure of the		os for retrieval of a buffer,	4			
Ш	I Ii ii o	nternal Repression of the structure of the super blotther file types.	sentation of File e of the regular ock, inode assign	file, directories, comment to a new file,	nversion of a pathname to allocation of disk blocks,	4			
IV	C	open, Read, wi Creation of Spe	cial File, Chang	ecord Locking, LSE	EEK, Close, File Creation, ange Root, Change Owner Jnlink.	4			
V	S P P	tructure of Pr rocess stages rocess, saving	ocess and transitions, context of a proc	layout of system 1	memory, the context of a the process address space.	4			
VI	P ir	nvoking other p	n, signals, proceedings		aiting process termination, shell, system Boot and the clock.	5			
				Text Books					

1	Maurice J. Bach, "The Design of Unix Operating System", PHI, 1994.						
2	Sumitabha Das, "Unix Concepts and Applications", TMGH, 4th Edition, 2017.						
	References						
1	Beej Jorgensen, "Beej's Guide to Unix IPC", Brian -Beej Jorgensen Hall, Version 1.1.2, December, 2010						
2	Kay Robbins, Steve Robbins, "UNIX Systems Programming: Communication, Concurrency and Threads", Pearson, 2nd Edition, December, 2015						
3	Eric Raymond, "Art of UNIX Programming", Pearson, 1st edition, October, 2003						
	Useful Links						
	https://nptel.ac.in/courses/106/102/106102132/						
1	(Intro to Unix System Calls Part 1/2, Kernel Data Structures, Process structure, Context						
	Switching, Fork, Context-Switch, Process Control Block, Locking, File System Implementation,						
	File System Operation)						
2	https://onlinecourses.nptel.ac.in/noc19_cs50						
	(Processes, Scheduling in Linux, IPC, thread)						
3	https://github.com/suvratapte/Maurice-Bach-Notes						
4	https://github.com/mit-pdos/xv6-public						
5	https://www.geeksforgeeks.org/introduction-to-unix-system/						
6	http://www.di.uevora.pt/~lmr/syscalls.html						

	Programme Outcomes (PO)										PSO			
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1			3						2	The second management of the second			TO PERSONAL PARTIES AND THE STATE OF THE STA	
CO2		2			OFFICE OF STATE OF ST	CONTRACTOR STATES		<del> </del>		İ		2	2	-
CO3			2	1						<del> </del>	***************************************			

## Assessment

Bloom's Taxonomy Level	T1	T2	Lab ESE	Total
Remember	Not Allowed	Not Allowed	Not Allowed	Not Allowed
Understand	5	5	10	20
Apply	10	5	15	30
Analyze	5	5	15	25
Evaluate		5	15	20
Create			5	5
Total	20	20	60	100

				ge of Engineering, ded Autonomous In		
		The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon		Y 2021-22		
			CALLED THE RESIDENCE OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PR	se Information		
Progr	amme		B.Tech. (Informati		ionidades ya Andreka kasak kasak kisak kisaka da da da da kasak kisak kisak kisak kasak kisak kisak kisak kisak	ennuasiuumise pimikuvyymivaa jimy (ikaisissa javastuksissa kaisissa
	Semes	······································	Third Year B. Tec	h., Sem VI		
	e Code		SIT322			
	e Nam		Parallel Computin		nether and normal or A Mark and Analysis And Analysis and Mark Add Market and Analysis Analysis (1988) (1988) (1989) (1989) (1989)	
)esire	ed Req	uisites:	Computer Algorith	<u>Im</u>	Facility and another process of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the	To the contract of the total sea for the second of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contrac
T	eachin	g Scheme		Examination S	Scheme (Marks)	
Lectu	re	2 Hrs/week	<b>T1</b>	Т2	ESE	Total
Cutor	ial	1	20	20	60	100
Practi	ical	-				
ntera	nteraction - Credits: 3					
3 3 3 3 1 L L T	1 42 15 15 14 14 15 15 15 15 15 15 15 15 15 15 15 15 15					
	·			rse Objectives		
1			rallel computing in or rocess of parallelization			
3			ead and process conc			
3	1000	mprenena une	au anu process conc	cpt in paranci comp	outing	
CO2 CO3			code to speed-up the algorithm for the eng			Apply Create
Modu	ıle			lule Contents		Hours
MIUUU						
I						
I II	G	PGPU Progran				6 4
III II	G T	PGPU Programents in process	ssor architecture and	limitations of mem	ory systems	4 4
I II III IV	G T D	PGPU Programmends in procestichotomy and	ssor architecture and organization of paral	limitations of memelel platforms	ory systems	4 4 4
III II	G T D C	PGPU Programmends in processichotomy and ommunication	ssor architecture and	limitations of memoralel platforms hines	ory systems	4 4
I II III IV V	G T D C	PGPU Programmends in processichotomy and ommunication	ssor architecture and organization of paral costs in parallel mac ism and processor m	limitations of memoralel platforms hines	ory systems	4 4 4 4
I II III IV V	G T D C R	PGPU Programmends in processichotomy and communication outing mechanication outing mechanicat	ssor architecture and organization of paral costs in parallel mac ism and processor m  Tall Gupta, George Kar	limitations of mem- lel platforms hines apping techniques ext Books ypis, Vipin Kumar,		4 4 4 4
I II III IV V VI	G T D C R	PGPU Programmends in processichotomy and communication outing mechanism of Grama, Ansural Edition, Peacun Han, Bhartana, Bhart	ssor architecture and organization of paral costs in parallel mac ism and processor m	limitations of mem- lel platforms hines apping techniques ext Books ypis, Vipin Kumar,	"Introduction to pa	4 4 4 4 4 4 rallel computing"
I II III IV V VI	G T D C R	PGPU Programmends in processichotomy and communication outing mechanication outing mechanication outing mechanication outing processing the Grama, Ansural Edition, Pearsural Edition, P	ssor architecture and organization of paral costs in parallel machism and processor mathematical Gupta, George Kararson Education, 200	limitations of mem- lel platforms hines apping techniques ext Books ypis, Vipin Kumar,	"Introduction to pa	4 4 4 4 4 7
I II IV V VI	G T D C R R Anatt Secon Jaege publi	rends in procestic hotomy and communication outing mechan outing mechan deficient, Peace and Edition, Peace and Han, Bhashing, 2019	ssor architecture and organization of paral costs in parallel machism and processor multiple of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of	limitations of mem- lel platforms hines apping techniques ext Books ypis, Vipin Kumar, 3 "Learn CUDA I	"Introduction to pa Programming", Fir	4 4 4 4 4 7 4 8 7 8 8 8 8 8 9 8 9 8 9 9 9 9 9 9 9 9 9
I II III IV V VI	G T D C R R Anati Secon Jaege publi	rends in procestic hotomy and communication outing mechan outing mechan deficient, Peace and Edition, Peace and Han, Bhashing, 2019	ssor architecture and organization of paral costs in parallel machism and processor multiple of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of	limitations of mem- lel platforms hines apping techniques ext Books ypis, Vipin Kumar, 3 "Learn CUDA I	"Introduction to pa Programming", Fir	4 4 4 4 4 7 4 st Edition, Pack
I II III IIV V VI VI 1 2	G T D C R R Anati Secon Jaege publi	rends in processic hotomy and communication outing mechan outing mechan deficient, Personal Edition, 2019	ssor architecture and organization of paral costs in parallel machism and processor multiple of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of	limitations of mem- lel platforms hines apping techniques ext Books ypis, Vipin Kumar, 3 "Learn CUDA I	"Introduction to pa Programming", Fir	4 4 4 4 4 7 4 8 7 8 8 8 8 8 9 8 9 8 9 9 9 9 9 9 9 9 9
I II III IIV V VI VI 1 2	Anatt Secon Jaege publi	PGPU Programmends in processichotomy and communication outing mechanism outing mechanism decition, Peasun Han, Bhashing, 2019  Dowitz, Sahni Rampany Press, 2019  Company Press, 2019	ssor architecture and organization of paral costs in parallel machism and processor multiple of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of the costs of	limitations of mem- lel platforms hines apping techniques 'ext Books ypis, Vipin Kumar, 3 "Learn CUDA II References er Algorithms", Co	"Introduction to pa Programming", Fir	4 4 4 4 4 4 rallel computing

***************************************				P	rograi	nme C	Outcon	nes (PC						PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1		10,000,000,000,000	*** **********************************		3	4 hall 111 de ad en de dep app a y (1-1)				***************************************		1		
CO2	The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	1			2					***************************************		***************	1	
CO3	1	2					***************************************			*****************	************			2
												Marial de Laboration qualitation quantitation		4

## **Assessment**

Bloom's Taxonomy Level	T1	T2	ESE	Total
Remember	Not Allowed	Not Allowed	Not Allowed	Not Allowed
Understand	5	5	10	20
Apply	10	5	15	30
Analyze	5	5	15	25
Evaluate		5	15	20
Create			5	5
Total	20	20	60	100

			llege of Engineering		
		(Government .	Aided Autonomous I	nstitute)	
		~	AY 2021-22		
			urse Information		
Progra			nation Technology)		
	Semester	Third Year B. T	ech., Sem VI	Madaga Madala Ma	
	e Code	SET 371			
	e Name	Unix Operating		ORVITHE, THE SHARE STREET, THE STREET, THE STREET, AND STREET, AND STREET, AND STREET, AND STREET, AND STREET,	
Desire	d Requisites:	Operating Syste	em, (C/python) Progr	amming language	
	eaching Scheme			Scheme (Marks)	
Lectur		LA1	LA2	Lab ESE	Total
Tutori		30	30	40	100
Practio					4-4-4-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1
Intera	ction -		Cre	edits: 1	
			ourse Objectives		
1	To use various syste				
2	To elaborate the var				
3	To impart the inter	process communic	eations for solving the	e real world problems	
	Coi	irse Outcomes (C	CO) with Bloom's Ta	axonomy Level	
At the	end of the course, the	students will be a	ible to,	орожно до посторожно по при ток об в <del>Посто на посто на по</del> Стата на посто на посто на посто на посто на посто на посто на посто на посто на посто на посто на посто на пост	And the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s
CO1	Illustrate the differe		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		Apply
CO2			ux/Unix programmin	<u>¢</u>	Analyze
CO3			nunications available		Apply
000					
1. 2. 3. 4. 5.	_	Signals: signal(any	y three type of signal	all variations exec), and  ), alarm, kill, signal	exit
6. 7. 8. 9.		In c language (P the maphore. h-semge the: msgget, msgsnowy: shmget, shmat, at system calls in C	hread) clone, threads et, semctl, semop d, msgrcv , shmdt Vsocket programmin		
6. 7. 8. 9.	Threading concept: IPC: Semaphore: se IPC: Message Queu IPC: Shared memor IPC: Sockets: socket IPC: Pipe/FIFO	In c language (P the maphore. h-semge the: msgget, msgsnowy: shmget, shmat, at system calls in C	hread) clone, threads et, semetl, semop d, msgrev , shmdt C/socket programmin		
6. 7. 8. 9. 10.	Threading concept: IPC: Semaphore: se IPC: Message Queu IPC: Shared memor IPC: Sockets: socket IPC: Pipe/FIFO . Scripting writing in	In c language (P themaphore, h-semgenter, msgget, msgget, y: shmat, at system calls in Continuation and python	hread) clone, threads et, semctl, semop d, msgrcv , shmdt C/socket programmin n Text Books	g of Java/python.	
6. 7. 8. 9. 10.	Threading concept: IPC: Semaphore: se IPC: Message Queu IPC: Shared memor IPC: Sockets: socket IPC: Pipe/FIFO . Scripting writing in Maurice J. Bach, "7	In c language (P the maphore. h-semge the magget, magget, magget; shmat, at system calls in Contain Linux and pythore. The Design of Unix	hread) clone, threads et, semctl, semop d, msgrcv , shmdt c/socket programmin  Text Books c Operating System",	g of Java/python. PHI, 1994.	
6. 7. 8. 9. 10.	Threading concept: IPC: Semaphore: se IPC: Message Queu IPC: Shared memor IPC: Sockets: socket IPC: Pipe/FIFO . Scripting writing in Maurice J. Bach, "7	In c language (P the maphore. h-semge the magget, magget, magget; shmat, at system calls in Contain Linux and pythore. The Design of Unix	hread) clone, threads et, semctl, semop d, msgrcv , shmdt C/socket programmin n Text Books	g of Java/python. PHI, 1994.	
6. 7. 8. 9. 10.	Threading concept: IPC: Semaphore: se IPC: Message Queu IPC: Shared memor IPC: Sockets: socket IPC: Pipe/FIFO . Scripting writing in Maurice J. Bach, "7	In c language (P the maphore. h-semge the magget, magget, magget; shmat, at system calls in Contain Linux and pythore. The Design of Unix	hread) clone, threads et, semctl, semop d, msgrcv , shmdt C/socket programmin  Text Books C Operating System", Applications", TMGI	g of Java/python. PHI, 1994.	
6. 7. 8. 9. 10.	Threading concept: IPC: Semaphore: se IPC: Message Queu IPC: Shared memor IPC: Sockets: socket IPC: Pipe/FIFO . Scripting writing in  Maurice J. Bach, "T Sumitabha Das, "Un Beej Jorgensen, "	In c language (P the maphore. h-semge the magget, magget, magget; shmat, at system calls in Contact Linux and pythore the Design of Unix mix Concepts and American Linux and American Linux and American Linux and American Linux and American Linux and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and American Linux Concepts and Ameri	hread) clone, threads et, semctl, semop d, msgrcv , shmdt C/socket programmin  Text Books C Operating System", Applications", TMGI  References	g of Java/python. PHI, 1994.	Version 1.1.2,
6. 7. 8. 9. 10.	Threading concept: IPC: Semaphore: se IPC: Message Queu IPC: Shared memor IPC: Sockets: socket IPC: Pipe/FIFO  Scripting writing in  Maurice J. Bach, "7  Sumitabha Das, "Un  Beej Jorgensen, " December, 2010  Kay Robbins, Steve	In c language (P the maphore. h-semge the magget, magget, magget; shmat, of system calls in Carlo Linux and pythore. The Design of Unix mix Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concep	hread) clone, threads et, semctl, semop d, msgrcv , shmdt C/socket programmin  Text Books C Operating System", Applications", TMGI  References Unix IPC", Brian C Systems Programm	g of Java/python.  PHI, 1994. H, 4 th Edition, 2017.	
6. 7. 8. 9. 10.	Threading concept: IPC: Semaphore: se IPC: Message Queu IPC: Shared memor IPC: Sockets: socket IPC: Pipe/FIFO . Scripting writing in  Maurice J. Bach, "7 Sumitabha Das, "Un Beej Jorgensen, "December, 2010  Kay Robbins, Steve Threads", Pearson,	In c language (P the maphore. h-semge the msgget, msgsnown by: shmget, shmat, at system calls in Carlon Linux and pythore the Design of Unix mix Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active C	hread) clone, threads et, semctl, semop d, msgrcv , shmdt C/socket programmin m  Text Books Coperating System", Applications", TMGI  References Unix IPC", Brian  C Systems Programm cember, 2015	g of Java/python.  PHI, 1994.  H, 4 th Edition, 2017.  -Beej Jorgensen Hall,	
6. 7. 8. 9. 10.	Threading concept: IPC: Semaphore: se IPC: Message Queu IPC: Shared memor IPC: Sockets: socket IPC: Pipe/FIFO . Scripting writing in  Maurice J. Bach, "7 Sumitabha Das, "Un Beej Jorgensen, "December, 2010  Kay Robbins, Steve Threads", Pearson,	In c language (P the maphore. h-semge the maphore. h-semge the maphore. h-semge the maphore. The maphore is system calls in Control of Unix and python in Linux and py	hread) clone, threads et, semctl, semop d, msgrcv d, shmdt C/socket programmin  Text Books Coperating System", Applications", TMGI  References Unix IPC", Brian C Systems Programm cember, 2015 mming", Pearson, 1st	g of Java/python.  PHI, 1994. H, 4 th Edition, 2017.  -Beej Jorgensen Hall, ing: Communication, C	
6. 7. 8. 9. 10.	Threading concept: IPC: Semaphore: se IPC: Message Queu IPC: Shared memor IPC: Sockets: socket IPC: Pipe/FIFO  Scripting writing in  Maurice J. Bach, "7  Sumitabha Das, "Un  Beej Jorgensen, " December, 2010  Kay Robbins, Steve Threads", Pearson, Eric Raymond, "Ar	In c language (P the maphore. h-semge the magget, magget, magget; shmat, of system calls in Contact and pythore. The Design of Unix mix Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts and Active Concepts a	hread) clone, threads et, semctl, semop d, msgrev d, shmdt C/socket programmin  Text Books Coperating System", Applications", TMGI  References Unix IPC", Brian C Systems Programm cember, 2015 mming", Pearson, 1st  Useful Links	g of Java/python.  PHI, 1994. H, 4 th Edition, 2017.  -Beej Jorgensen Hall, ing: Communication, C	
6. 7. 8. 9. 10.	Threading concept: IPC: Semaphore: se IPC: Message Queu IPC: Shared memor IPC: Sockets: socket IPC: Pipe/FIFO  Scripting writing in  Maurice J. Bach, "7  Sumitabha Das, "Un  Beej Jorgensen, "December, 2010  Kay Robbins, Steve Threads", Pearson, Eric Raymond, "Ar  https://users.cs.cf.ac	In c language (P the maphore. h-semge the magget, magget, magget, y: shmget, shmat, of system calls in Contact and pythore. The Design of Unix mix Concepts and Active Robbins, "UNIX 2nd Edition, Decent of UNIX Programs. Luk/Dave.Marshall	hread) clone, threads et, semctl, semop d, msgrcv , shmdt C/socket programmin m  Text Books Coperating System", Applications", TMGI  References Unix IPC", Brian C Systems Programm cember, 2015 mming", Pearson, 1st  Useful Links	g of Java/python.  PHI, 1994. H, 4 th Edition, 2017.  -Beej Jorgensen Hall, ing: Communication, C	
6. 7. 8. 9. 10.	Threading concept: IPC: Semaphore: se IPC: Message Queu IPC: Shared memor IPC: Sockets: socket IPC: Pipe/FIFO  Scripting writing in  Maurice J. Bach, "7  Sumitabha Das, "Un  Beej Jorgensen, "December, 2010  Kay Robbins, Steve Threads", Pearson, Eric Raymond, "Ar  https://users.cs.cf.achttps://github.com/s	In c language (P the maphore. h-semge the magnet, magnet, magnet, shmat, but system calls in Carlon Linux and pythore and Linux and pythore and Linux and pythore and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and Linux Concepts and	hread) clone, threads et, semctl, semop d, msgrcv , shmdt C/socket programmin  Text Books C Operating System", Applications", TMGI  References Unix IPC", Brian C Systems Programm cember, 2015 mming", Pearson, 1st Useful Links lI/C/ e-Bach-Notes	g of Java/python.  PHI, 1994. H, 4 th Edition, 2017.  -Beej Jorgensen Hall, ing: Communication, C	
6. 7. 8. 9. 10.	Threading concept: IPC: Semaphore: se IPC: Message Queu IPC: Shared memor IPC: Sockets: socket IPC: Pipe/FIFO  Scripting writing in  Maurice J. Bach, "7  Sumitabha Das, "Un  Beej Jorgensen, "December, 2010  Kay Robbins, Steven Threads", Pearson, Eric Raymond, "Ar  https://users.cs.cf.ac https://github.com/s	In c language (P the maphore. h-semge the magget, magget, magget, y: shmget, shmat, at system calls in Contact and pythore. The Design of Unix mix Concepts and Act and Edition, Decit of UNIX Programme. Luk/Dave.Marshall uvratapte/Maurice mit-pdos/xv6-public mit-pdos/xv6-public mit-pdos/xv6-public magget.	hread) clone, threads et, semctl, semop d, msgrcv , shmdt C/socket programmin  Text Books COperating System", Applications", TMGI  References Unix IPC", Brian C Systems Programm cember, 2015 mming", Pearson, 1st Useful Links ll/C/ c-Bach-Notes ic	g of Java/python.  PHI, 1994. H, 4 th Edition, 2017.  -Beej Jorgensen Hall, ing: Communication, Content of the edition, October, 2003	
6. 7. 8. 9. 10.	Threading concept: IPC: Semaphore: selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selection in the selec	In c language (P the maphore. h-semge the maphore. h-semge the maphore. h-semge the maphore. he maphore the Design of Unix mix Concepts and A the Design of Unix mix Concepts and A the Design of Unix The Design of Unix Mark Concepts and A the Design of Unix Program to the UNIX Program to the UNIX Program the Unit-pdos/xv6-public orgeeks.org/introduction.	hread) clone, threads et, semctl, semop d, msgrev d, shmdt C/socket programmin  Text Books Coperating System", Applications", TMGI  References Unix IPC", Brian C Systems Programm cember, 2015 mming", Pearson, 1st Useful Links ll/C/ e-Bach-Notes ic uction-to-unix-system	g of Java/python.  PHI, 1994. H, 4 th Edition, 2017.  -Beej Jorgensen Hall, ing: Communication, Content of the edition, October, 2003	
6. 7. 8. 9. 10.	Threading concept: IPC: Semaphore: se IPC: Message Queu IPC: Shared memor IPC: Sockets: socket IPC: Pipe/FIFO  Scripting writing in  Maurice J. Bach, "7  Sumitabha Das, "Un  Beej Jorgensen, "December, 2010  Kay Robbins, Steven Threads", Pearson, Eric Raymond, "Ar  https://users.cs.cf.ac https://github.com/s	In c language (P the maphore. h-semge the maphore. h-semge the maphore. h-semge the maphore. he maphore the Design of Unix mix Concepts and A the Design of Unix mix Concepts and A the Design of Unix The Design of Unix Mark Concepts and A the Design of Unix Program to the UNIX Program to the UNIX Program the Unit-pdos/xv6-public orgeeks.org/introduction.	hread) clone, threads et, semctl, semop d, msgrev d, shmdt C/socket programmin  Text Books Coperating System", Applications", TMGI  References Unix IPC", Brian C Systems Programm cember, 2015 mming", Pearson, 1st Useful Links ll/C/ e-Bach-Notes ic uction-to-unix-system	g of Java/python.  PHI, 1994. H, 4 th Edition, 2017.  -Beej Jorgensen Hall, ing: Communication, Content of the edition, October, 2003	

						CO-l	PO M	apping						
	Programme Outcomes (PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1		2		1	111 mmining pa ma m, 1 pampy	THE REAL PROPERTY OF THE PARTY							1	
CO2					3	***************************************		And the transfer of the second second				2	2	
CO3		1		2		HITTORICA CAMPAGAMA ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANALAS ANA	ĺ			Personal Section Management Assessment		1		2

#### Assessment

There are three components of lab assessment, LA1, LA2 and Lab ESE.

IMP: Lab ESE is a separate head of passing. LA1, LA2 together is treated as In-Semester Evaluation.

Assessment	Based on	Conducted by	Typical Schedule (for 26-week Sem)	Marks			
LA1	Lab activities,	Lab Course	During Week 1 to Week 6	20			
LAI	attendance, journal	Faculty	Marks Submission at the end of Week 6	30			
LA2	Lab activities,	Lab activities, Lab Course During Week 7 to Week 12					
LAZ	attendance, journal	Faculty	Marks Submission at the end of Week 12	30			
Lab ESE	Lab activities,	Lab Course	During Week 15 to Week 18	40			
Lau ESE	attendance, journal	Faculty	Marks Submission at the end of Week 18	40			

Week 1 indicates starting week of a semester. The typical schedule of lab assessments is shown, considering a 26-week semester. The actual schedule shall be as per academic calendar. Lab activities/Lab performance shall include performing experiments, mini-project, presentations, drawings, programming and other suitable activities, as per the nature and requirement of the lab course. The experimental lab shall have typically 8-10 experiments.

Assessin	ent Plan based on	Bloom's Laxonom	iy Levei	
Bloom's Taxonomy Level	LA1	LA2	Lab ESE	Total
Remember	Not Allowed	Not Allowed	Not Allowed	Not Allowed
Understand	5		and the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of t	05
Apply	20	20	20	60
Analyze	5	5	10	20
Evaluate		5	5	10
Create			5	5
Total	30	30	40	100

	and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s			ege of Engineering				
				ded Autonomous I	nstitute)			
Marine (1889)				Y 2021-22				
D			**************************************	se Information				
Progra			B.Tech. (Informat Third Year B. Tec					
Class,	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			II., Seili VI	A CANALA CALABANA CALIFORNIA DA CANALA			
Course			5IT372					
Course			Web Technology					
Desire	a Keg	uisites:	Basic Programmin	ig Concepts	THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE S			
		g Scheme	T A 4	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Scheme (Marks)	TC-4-1		
Lectur	****	-	LA1	LA2	ESE	Total		
Tutori	~~~~~~~		30	30	40	100		
Practio		2 Hrs/week						
Intera	ction	1 Hr/week		Cre	dits: 2			
-0.4			_					
	-			rse Objectives				
1			nciples web based a					
2			ent side and server					
3	To d				nt management system			
			rse Outcomes (CO	· ( ) · · · · · · · · · · · · · · · · ·	axonomy Level			
At the			students will be abl			Apply		
CO1 Develop web-based application using client and server side web technologies								
CO2	Crea	te a web page w	rith elements and att	ributes		Create		
CO3	Desi	gn solution for	various application i	using web framewo	orks	Create		
	(,							
Modu	le		Mod	ule Contents		Hours		
I	F St C	tyles, formatting CSS Introduction	ion, HTML editors, lists, tables, layoun, syntax, selector, text family, font	t, forms s, colors, backgro	res, headings, paragraphs, bunds, borders, margins, a bar, dropdowns, forms,	2		
II	J Id o it	avascript ntroduction to bjects, events, o	Javascript, syntax, late formats, math, ject classes, compo	control flow states	rs, data types, functions, nents, forms, objects and to server-side and client-	2		
Ш	P E S' F	HP Basics of PHP, in trings, numbers form handling, f	nstallation of PHP, o , math, constants, op	perators, control floor n required, from U	es, echo/print, data types, ow statements, arrays, RL, form complete, date les, session.	3		
IV	V	<b>Object oriented</b> What is OOP?,	PHP	s, constructor, des	tructor, access modifiers,	2		
V	N	•	_	•	eating database, inserting	2		
VI	In v	Bootstrap and rate of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of	esponsive web desi ootstrap, installatio orizontal forms, dro	ign n of bootstrap, grid pdowns, responsiv ge headers, tooltips	system, buttons, tables, e tabs, progress bar, , responsive web design:	2		
			List of Exper	iments / Lab Acti	vities			

#### List of Experiments: 1. Program on HTML basic tags for text formatting. 2. Program on HTML tag to handle multimedia elements on web page. 3. Program on HTML tag to create forms and UI elements. Program on CSS properties for HTML web page. 4. 5. Program on applying event handling on HTML web page using JavaScript. 6. Program on applying layout to HTML webpage. 7. Program on PHP controls statements. 8. Program on PHP string operations. Program on PHP form creation and data handling. 9. 10. Program on session management using PHP. 11. Program on Cookies management using PHP. 12. Program on PHP to connect MySOL database for CURD operations. Program on Bootstrap/ responsive web design using different components. 13. **Text Books** P.J. Deitel & H.M. Deitel Pearson, "Internet and World Wide Web How to program", Pearson 1 Education India, 4th Edition, 2009 Jon Duckett, "HTML and CSS: Design and Build Websites", John Wiley & Sons, Inc. 1st Edition. 2 2011 References

2	Ivan Bayross, "Web Enabled Commercial Application Development Using HTML, JavaScript, DHTML and PHP", BPB Publications, 4th Edition, 2006
	Useful Links
1	https://www.coursera.org/learn/web-app#syllabus
2	https://www.coursera.org/specializations/web-applications
3	https://www.udemy.com/course/foundations-of-front-end-development/

Steven M. Schafer, "HTML, XHTML and CSS", Wiley India Edition, 5th Edition, 2010.

				Andrews		CO-I	O Ma	pping						
	and the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of th				Programme Outcomes (PO)								PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1		2		1			West Marie of a management of the first of a management			<u> </u>		<del> </del>		***************************************
CO2				CHARLES OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PAR			*******************************		2	İ				
CO3				anni anni anni anni anni anni anni anni	2		******************			1				1

The strength of mapping is to be written as 1,2,3; Where, 1:Low, 2:Medium, 3:High Each CO of the course must map to at least one PO.

## Assessment

The assessment is based on 2 in-semester evaluations (ISE) of 10 marks each, 1 mid-sem examination (MSE) of 30 marks and 1 end-sem examination (ESE) of 50 marks.

MSE is based on the modules taught till MSE (typically Module 1-3) and ESE is based on all modules with 30-40% weightage on modules before MSE and 60-70% weightage on modules after MSE.

Bloom's Taxonomy Level	LA1	Bloom's Taxonom	r overstaan ta Fritain kan disaanii ilija ja j <del>alee ja ja jalee ja ja ja ja ja ja ja ja ja ja ja ja ja </del>	I
Diddin's raxonomy Level	LAI	LA2	Lab ESE	Total
Remember	Not Allowed	Not Allowed	Not Allowed	Not Allowed
Understand	5			05
Apply	20	20	20	60
Analyze	5	5	10	20
Evaluate		5	5	10
Create			5	5
Total	30	30	40	100

# Walchand College of Engineering, Sangli (Government Aided Autonomous Institute)

#### AY 2021-22

Class, Semester	Third Year B. Tech., Sem VI
Programme	B.Tech. (Information Technology)
	Course Information

Course Code 511347
Course Name Mini Project - 4

**Desired Requisites:** Database Engineering

Teachin	ng Scheme		Examination	n Scheme (Marks)	)
Lecture		LA1	LA2	Lab ESE	Total
Tutorial	-	30	30	40	100
Practical	2 Hrs/Week				
Interaction	-		Cı	redits: 1	

	Course Objectives	
1	To introduce latest database system and it's design	
2	To find real-world challenges by IT based Solution	
3	To build the soft skills of student to work in team.	
100	Course Outcomes (CO) with Bloom's Taxonomy Level	
At the en	d of the course, the students will be able to,	
CO1	Demonstrate the database design	Apply
CO2	Identify the real world problems & apply software engineering practices	Analyze
CO3	Design software application with backend and project report for submission	Create

## List of Experiments / Lab Activities

## List of Experiments:

Mini-project is to be carried out in a group of maximum 5 to 6 students.

Each group will carry out a mini-project by developing any application software based on the following areas.

- 1. Data based application development using any trending database system like: structured and unstructured DBs (PGSQL, NoSQL, MongoDB, oracle, Maria Db, RDF, firebase, etc.)
- 2. Industry based problem / Sponsored application /Game/ Interdisciplinary application /socially useful application / Problem solving of previously learned complex concepts.
- 3. Project group should achieve all the proposed objectives of the problem statement.
- 4. The work should be completed in all aspects of design, implementation and testing and follow software engineering practices.
- 5. Project reports should be prepared and submitted in soft and hard form along with the code and other dependency documents. Preferable use online code repositories (github/bitbucket)
- 6. Project will be evaluated continuously by the guide/panel as per assessment plan.
- 7. Presentation and report should use standard templates provided by department.
- 8. Ppreferably choose DB other than taught in MySQL/MSSQL.

Project report (pre-defined template) should be prepared using Latex/Word and submitted along with soft copy on CD/DVD (with code, PPT, PDF, Text report document & reference material) or on an online repository.

Students should maintain a project log book containing weekly progress of the project.

# Text Books

Rajendra Kumbhar, "How to Write Project Reports, Ph. D. Thesis and Research Articles", Universal Prakashan, 2015

2	Marilyn Deegan, "Academic Book of the Future Project Report", A Report to the AHRC & the British Library, 2017
	References
1	https://www.youtube.com/watch?v=0oSDa2kf5I8 (report writing )
2	
	Useful Links
1	https://pats.cs.cf.ac.uk/wiki/lib/exe/fetch.php?media=project-report.pdf
2	http://users.iems.northwestern.edu/~hazen/Writing%20Project%20Reports%202004a.pdf
3	https://www.upgrad.com/blog/java-project-ideas-topics-for-beginners/
4	https://www.geeksforgeeks.org/computer-science-projects/

					***************************************	~~·	О Мар	r6		355	28.245.4840			
	Programme Outcomes (PO)										PSO			
Service Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of th	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1		1			2				The second second second second second second second second second second second second second second second se			3		Ì
CO2						North of a nertime objection (and observed)				2			2	

#### Assessment

There are three components of lab assessment, LA1, LA2 and Lab ESE.

IMP: Lab ESE is a separate head of passing. LA1, LA2 together is treated as In-Semester Evaluation.

	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			
Assessment	Based on	Conducted by	Typical Schedule (for 26-week Sem)	Marks
LA1	Lab activities,	Lab Course	During Week 1 to Week 6	20
LAI	attendance, journal	Faculty	Marks Submission at the end of Week 6	30
LA2	Lab activities,	Lab Course	During Week 7 to Week 12	1 20
LAZ	attendance, journal	Faculty	Marks Submission at the end of Week 12	30
Lab ESE	Lab activities,	Lab Course	During Week 15 to Week 18	40
Lau ESE	attendance, journal	Faculty	Marks Submission at the end of Week 18	40

Week 1 indicates starting week of a semester. The typical schedule of lab assessments is shown, considering a 26-week semester. The actual schedule shall be as per academic calendar. Lab activities/Lab performance shall include performing experiments, mini-project, presentations, drawings, programming and other suitable activities, as per the nature and requirement of the lab course. The experimental lab shall have typically 8-10 experiments.

Bloom's Taxonomy Level	LA1	LA2	Lab ESE	Total
Remember	Not Allowed	Not Allowed	Not Allowed	Not Allowed
Understand				
Apply	15	10	10	35
Analyze	5	10	5	20
Evaluate	5	5	10	20
Create	5	5	15	25
Total Marks	30	30	40	100

				of Engineering, Autonomous Ins		
······································			AY 2	021-22		
			Course I	nformation		
Progra	ımme		B.Tech. (Infor	mation Technol	ogy)	
Class,	Semester	•	Third Year B.	Tech., Sem VI		
Course	e Code		SIT 348	>		
Course	e Name	ARRA AL ARRIVA (N. 1904). A RECOLUTER DE APOUTOPPANÇE DI GRAN BROVE E ALCONOS ESS. A GEORGIANA (N.	Mini Project -	5		
Desire	d Requis	ites:	AIML, Web T	echnology		
	Teachin	g Scheme		Examination	1 Scheme (Marks)	
Lectur	'e	MA	LA1	LA2	Lab ESE	Total
Tutori	al	-	30	30	40	100
Practic	cal	2 Hrs/Week				
Intera	ction			Cı	edits: 1	
			Course (Objectives		
1	To int	roduce latest web			a positivo programa programa por esta de la constitución de la constit	
2		d real-world challe	and the state of t	d Solution		
3	To bui	ild the soft skills o				
			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	th Bloom's Tax	onomy Level	
At the	end of the	e course, the stude	nts will be able t	ю,		

# List of Experiments / Lab Activities

Design software application with backend and detailed project report for

Identify the real world problems & apply software engineering practices.

## List of Experiments:

CO₁

CO₂

CO₃

Mini-project is to be carried out in a group of maximum 5 to 6 students.

Implement AI based applications or Web application

submission and evaluation.

Each group will carry out a mini-project by developing any application software based on the following areas.

- 1. Development using any web application or AIML based application
- 2. Industry based problem / Sponsored application /Game/ Interdisciplinary application /socially useful application / Problem solving of previously learned complex concepts.
- 3. Application area for AI/ML: Transport, Agriculture, Networking monitoring, environment, Social life Smart City Development, health, smart home etc.
- 4. Web application development using any front end technology: PHP, NODE.JS, django. Flask, Ruby on Rails, etc
- 5. Data based application development using any trending database system like: MySQL, PGSQL, NoSQL, MongoDB, etc.
- 6. Project group should achieve all the proposed objectives of the problem statement.
- 7. The work should be completed in all aspects of design, implementation and testing and follow software engineering practices.
- 8. Project reports should be prepared and submitted in soft and hard form along with the code and other dependency documents. Preferable use online code repositories (github/bitbucket)
- 9. Project will be evaluated continuously by the guide/panel as per assessment plan.
- 10. Presentation and report should use standard templates provided by department. Project report (pre-defined template) should be prepared using Latex/Word and submitted along with soft copy on CD/DVD (with code, PPT, PDF, Text report document & reference material) or on an online repository. Students should maintain a project log book containing weekly progress of the project.

#### **Text Books**

Apply

Analyze

Create

1	Rajendra Kumbhar, "How to Write Project Reports, Ph. D. Thesis and Research Articles", Universal Prakashan, 2015
2	Marilyn Deegan, "Academic Book of the Future Project Report", A Report to the AHRC & the British Library, 2017
	References
1	References https://www.youtube.com/watch?v=0oSDa2kf518 (report writing )
1	https://www.youtube.com/watch?v=0oSDa2kf5I8 (report writing)
1	https://www.youtube.com/watch?v=0oSDa2kf5I8 (report writing )  Useful Links
1	https://www.youtube.com/watch?v=0oSDa2kf5I8 (report writing )  Useful Links
1 1 2	https://www.youtube.com/watch?v=0oSDa2kf5I8 (report writing)
1 1 2 3	https://www.youtube.com/watch?v=0oSDa2kf5I8 (report writing )  Useful Links  https://pats.cs.cf.ac.uk/wiki/lib/exe/fetch.php?media=project-report.pdf

	Programme Outcomes (PO) PSO													
~~~~	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1		1	***************************************		2				***************************************			3		
CO2		1						***************************************		2			2	

Assessment

There are three components of lab assessment, LA1, LA2 and Lab ESE.

IMP: Lab ESE is a separate head of passing. LA1, LA2 together is treated as In-Semester Evaluation.

Assessment	Based on	Conducted by	Typical Schedule (for 26-week Sem)	Marks
LA1	Lab activities,	Lab Course	During Week 1 to Week 6	20
LAI	attendance, journal	Faculty	Marks Submission at the end of Week 6	30
LA2	Lab activities,	Lab Course	During Week 7 to Week 12	20
LAZ	attendance, journal	Faculty	Marks Submission at the end of Week 12	30
Lab ESE	Lab activities,	Lab Course	During Week 15 to Week 18	40
Lau ESE	attendance, journal	Faculty	Marks Submission at the end of Week 18	40

Week 1 indicates starting week of a semester. The typical schedule of lab assessments is shown, considering a 26-week semester. The actual schedule shall be as per academic calendar. Lab activities/Lab performance shall include performing experiments, mini-project, presentations, drawings, programming and other suitable activities, as per the nature and requirement of the lab course. The experimental lab shall have typically 8-10 experiments.

LA1	LA2	Lab ESE	Total
Not Allowed	Not Allowed	Not Allowed	Not Allowed
And the second section of a few second section of the second seco			No. on the Manufacture of Manufacture of American State of the State o
15	10	10	35
5	10	5	20
5	5	10	20
5	5	15	25
30	30	40	100
		The state of the s	LA1 LA2 Lab ESE Not Allowed Not Allowed Not Allowed 15 10 10 5 10 5 5 5 10 5 15 30 30 40

	encondence was an energy or hard disconnections			follege of Engineer		
			(Governmen	t Aided Autonomou. AY 2021-22	s institute)	
	CARREST.		C	ourse Information		
Progr	amme			mation Technology)	**************************************	
	, Seme		Final Year B. 7		MARKA MANTALITY (1) BANKA AL-MINISTER (2) 18 AW PRIS 10	
	se Cod		SIT331		No distributed who saids are seen associated but that developed developed the see distributed to the seen associated by the seen associated by the seen associated by the seen associated by the seen associated by the seen associated by the seen associated by the seen associated by the seen associated by the seen associated by the seen associated by the seen as the	
	se Nam			lective - 2: Fundame	entals of Distributed Ope	rating System
		uisites:		ems, Distributed No		
			<u> </u>			
Te	aching	Scheme		Examination	n Scheme (Marks)	
Lectu		3 Hrs/week	T1	T2	ESE	Total
Tutor	ial	-	20	20	60	100
Practi	ical	_				
Intera	ection	-		Cı	redits: 3	
				Course Objectives		
1				es of distributed sys	stems	
2			us distributed sys			
3	To d				aming and synchronizati	on
				CO) with Bloom's	Taxonomy Level	
			he students will b			_
CO1				distributed operation	ng systems	Understand
CO2			t distributed file s			Analyse
CO3	Anal	yze distribute	ed web-based sys	tem and application	18	Analyse
Modu	ıle		Mo	dule Contents		Hours
				GUIC COMCOMO		110013
Y	Iı	ntroduction	to distributed Sy			
I					epts, Design issues	6
П	D C C is	definition and communication of the computer Net is us, synchologous process of the computer o	goals, Hardware on & Synchron work and Layere ronization, Clien lure call and im	ystems and Software concenization in distributed protocols, Messant Server model aplementation issue pronization and rela	A CONTRACTOR OF THE PROPERTY O	
	D C C is rec	communication and communication with computer Net sues, synchromote proceder, DEC RI sclusion, Dear rocesses and Threads, systems: Loatime distribution.	goals, Hardware ion & Synchron work and Layere ronization, Clier dure call and im PC Clock synch adlock in distribut I processors em model, proces d balancing and s red systems, Proces	ystems and Software concenization in distributed protocols, Messant Server model applementation issue pronization and related systems & Distributed File	ated systems: age passing and related & its implementation, as, Case Studies: SUN ated algorithms, mutual ale Systems: aduling in distributed ault tolerance, Real alelated issues	6
П	D C C is real R ex	communication and communication with the sues, synchromote procedured PC, DEC RECTURED PC, DEC RECTURED PC, DEC RECTURED PC, STATE AND ADDITIONAL TOTAL goals, Hardware ion & Synchron work and Layere ronization, Clier dure call and im C Clock synch idlock in distribut I processors em model, procest d balancing and si red systems, Proc features & goal hared Memory: general archite n issues of DSM	ystems and Software concenization in distributed protocols, Messant Server model of aplementation issue aronization and related systems & Distributed Filessor allocation, schoolsharing approach, faces migration and reof distributed file systems	ated systems: age passing and related the its implementation, as, Case Studies: SUN ated algorithms, mutual the Systems: aduling in distributed ault tolerance, Real algorithms are system, systems, design and ature of shared memory	7	

VI	Security & Case Study Google FS/BigTable Introduction of Security in Distributed OS, Overview of security techniques, features, Need, Access Control, Security Management, Java RMI, Sun Network File System, Google case study 5													
	TO STORY						Tex	t Boo	ks					
1	Pradee _l 1996	K. S	inha "	Distri	ibutea	l Ope	rating	Syste	ems C	oncep	ts and	l Desi _z	gn", Wil	ey–Blackwell,
2	George Design				ı Do	llimo	re,Tin	ı Kir	ıdberg	g " <i>I</i>	Distrib	outed	Systems:	Concepts an
							Ref	erenc	es					
1	Sunita	Mahaj	an & !	Seem	a Sha	h " <i>D</i>				ıting'	'OXF	ORD,	2013	
1	Sunita :	Mahaj	an & 3	Seema	a Sha	h " <i>D</i>	istribi		Сотрі	uting '	OXF	ORD,	2013	
1 1	Sunita	Mahaj	an &	Seem	a Sha		istribi	uted (Compi nks		'OXF	ORD,	2013	
1	Sunita :	Mahaj	an & :			C	istribi Usef	uted (ul Lin) Maj	Compi nks pping		'OXF	ORD,	2013	
1	Sunita	Mahaj	an & 8			C	istribi Usef	uted (ul Lin) Maj	Compi nks pping		OXF	ORD,		2
1 1 CO1 CO2				P	rograi	C mme C	istribi Usef	uted () ul Lir) Maj	Compi nks pping				PSO	2 2 2 2

Assessment

Bloom's Taxonomy Level	T1	Т2	ESE	Total
Remember	Not Allowed	Not Allowed	Not Allowed	Not Allowed
Understand	5	5	10	20
Apply	10	5	15	30
Analyze	5	5	15	25
Evaluate		5	15	20
Create			5	5
Total	20	20	60	100



	TALL OF HIS PARKETS AND THE	And the state of t		ge of Engineering led Autonomous I		
		PROPERTY OF THE STATE OF THE ST	****	Y 2021-22	www.	
				se Information		
Progra	amme		B.Tech. (Information			
Class,		ter	Third Year B. Ted			
Cours		***************************************				
Cours			SIT 33 2 Professional Elect	tive - 2: Full Stack	· Develonment	
		uisites:	Web Technology	iivo - 2. i un black		
I) CSII C	u rvq	uroxeco.	Web recimology		hald all declarities for free productions of the defendance of the depth of the confine for the depth of the confine for the depth of the confine for the depth of the confine for the depth of the confine for the depth of the confine for the depth of the confine for the depth of the confine for the depth of the confine for the depth of the confine for the depth of the confine for the depth of the confine for the depth of the depth of the confine for the depth of the dep	North Act of the Co. VI. Co. VII.
Те	achine	Scheme		Evamination !	Scheme (Marks)	
Lectur		3 Hrs/week	T1	T2	ESE	Total
Tutori		J III S/ WEEK	20	20	60	100
Practi			20			100
Intera			7 15 15 15 15 15 15 15 15 15 15 15 15 15	Cro	dits: 3	
Intera	CUUII		The state of the s	CIC	uito.	Wilderfall Colonia (Colonia Indiana)
			Cour	se Objectives		
1	To in	nart the design	and the second s		f static and dynamic we	h nagec
2			ns for web using Sci			o pages
3			pt of responsive wel			enning of any last he beautiful hillion of the least of the self-state of the least
			rse Outcomes (CO)		xonomy Level	
At the	end of		e students will be ab			
CO1			elements and proper		eb applications	Apply
CO2			namic web applicat	Property and the property of the property of the party of		Create
CO3	Desig	n and develop	responsive web ap	plications	- Official districts in a constitution of the district of the constitution of the cons	Create
Modu	ie					
	TT	TIMES OF THE		ile Contents		Hours
	- 1	TML 5 and B	lootstrap:	ue Contents		Hours
	В	ootstrap Intro	Sootstrap: oduction			
	B ₀	ootstrap Intro troduction, G	Sootstrap: oduction etting Started, Grid		Layout, Fluid Layout	
I	Bo In Ro	ootstrap Intro troduction, G esponsive Lay	Sootstrap: Oduction etting Started, Gridout, Typography		Layout, Fluid Layout	
I	In Re Be	ootstrap Intro troduction, G esponsive Lay ootstrap Basic	cootstrap: oduction etting Started, Gricout, Typography cs Elements:	d System, Fixed	•	7
I	Bo In Ro Bo Ju	ootstrap Intro troduction, G esponsive Layo ootstrap Basid mbotron oper	Bootstrap: Doduction Etting Started, Gridout, Typography Es Elements: In link, Button, But	d System, Fixed	id, Table, Form, Alert	7
I	Bo In Ro Bo Ju W	troduction, Gesponsive Layoutstrap Basic mbotron oper	cootstrap: coduction etting Started, Gricout, Typography cs Elements: link, Button, But & Label, Panels,	d System, Fixed ton Groups , Gr Pagination, Page	id, Table, Form, Alert er, Image, Glyphicon,	7
I	Bo In Ro Bo Ju W Ca	troduction, Gesponsive Layer tootstrap Basic mbotron oper fells, Badge arousel, Progre	cootstrap: coduction etting Started, Gricout, Typography cs Elements: link, Button, But Label, Panels, ess Bar, List Group,	d System, Fixed ton Groups , Gr Pagination, Page	id, Table, Form, Alert er, Image, Glyphicon,	7
I	Bo In Ro Bo Ju W Co In	troduction, Gesponsive Layoutstrap Basic mbotron oper fells, Badge arousel, Progre troduction to	cotstrap: Doduction etting Started, Gricout, Typography cs Elements: In link, Button, But & Label, Panels, ess Bar, List Group, Node JS:	d System, Fixed ton Groups, Gr Pagination, Page Dropdown, Colla	id, Table, Form, Alert er, Image, Glyphicon, pse, Tabs.	7
I	Be In Re Be Ju W Ca	troduction, Gesponsive Layer octstrap Basic mbotron oper fells, Badge arousel, Progret troduction to stall Node js V	cotstrap: Doduction etting Started, Gricout, Typography cs Elements: In link, Button, But & Label, Panels, ess Bar, List Group, Node JS:	d System, Fixed ton Groups, Gr Pagination, Page Dropdown, Colla	id, Table, Form, Alert er, Image, Glyphicon,	7
	Be In Re Be Ju W Ca In In Fi	troduction, Gesponsive Layer botstrap Basic mbotron open fells, Badge arousel, Progret troduction to stall Node.js Vest Example.	cootstrap: coduction etting Started, Gricout, Typography cs Elements: link, Button, But Label, Panels, ess Bar, List Group, Node JS: Windows and Linux	d System, Fixed ton Groups, Gr Pagination, Page Dropdown, Colla	id, Table, Form, Alerter, Image, Glyphicon, pse, Tabs. Module, URL Module	7
I	Bo In Ro Bo In W Ca	troduction, Gesponsive Layer botstrap Basic mbotron oper fells, Badge arousel, Progret troduction to stall Node.js Vest Example.	cootstrap: Doduction etting Started, Gricout, Typography cs Elements: In link, Button, But & Label, Panels, ess Bar, List Group, Node JS: Windows and Linux Package Manager, I	d System, Fixed ton Groups, Gr Pagination, Page Dropdown, Colla	id, Table, Form, Alert er, Image, Glyphicon, pse, Tabs.	7
	Bo In Ro Bo In W Ca	troduction, Gesponsive Layoustrap Basic mbotron oper fells, Badge arousel, Progret troduction to stall Node.js Verst Example. onsole, NPM:	cootstrap: Doduction etting Started, Gricout, Typography es Elements: I link, Button, But & Label, Panels, ess Bar, List Group, Node JS: Windows and Linux Package Manager, I	d System, Fixed ton Groups , Gr Pagination, Page Dropdown, Colla t, Modules, HTTP	id, Table, Form, Alerter, Image, Glyphicon, pse, Tabs. Module, URL Module de.js OS, Timer, Errors	7
	Be In Re Be Ju W Ca In In Fi Co Ne Bu	troduction, Gesponsive Layer otstrap Basic mbotron oper fells, Badge arousel, Progret troduction to stall Node.js Verst Example. Onsole, NPM: ode JS Basics affers, Stream	cootstrap: Doduction Etting Started, Gricout, Typography Ex Elements: In link, Button, Butt Label, Panels, Ex Bar, List Group, Node JS: Windows and Linux Package Manager, I Ex, File System, Pat	ton Groups, Gr Pagination, Page Dropdown, Colla A, Modules, HTTP Node Globals, Noo	id, Table, Form, Alerter, Image, Glyphicon, pse, Tabs. Module, URL Module de.js OS, Timer, Errors	7
	Book In Robert R	troduction, Gesponsive Layer of the East o	cootstrap: coduction etting Started, Gricout, Typography es Elements: n link, Button, But & Label, Panels, ess Bar, List Group, Node JS: Windows and Linux Package Manager, I es, File System, Pat Callbacks, Events, Pa	ton Groups, Gr Pagination, Page Dropdown, Colla A, Modules, HTTP Node Globals, Noo	id, Table, Form, Alerter, Image, Glyphicon, pse, Tabs. Module, URL Module de.js OS, Timer, Errors	7
П	Book In Robot Robo	cotstrap Introduction, Gesponsive Layer Dotstrap Basic mbotron oper fells, Badge arousel, Progrest troduction to stall Node.js Verst Example. Onsole, NPM: Dode JS Basics offers, Stream secretion, V8, Code JS and Mode JS an	cootstrap: coduction etting Started, Gridout, Typography es Elements: I link, Button, But & Label, Panels, ess Bar, List Group, Node JS: Windows and Linux Package Manager, I : s, File System, Pat Callbacks, Events, PaySQL:	ton Groups, Gragination, Page Dropdown, Colla Modules, HTTP Node Globals, Nooth, String Decode unycode, TTY, W	id, Table, Form, Alerter, Image, Glyphicon, pse, Tabs. Module, URL Module de.js OS, Timer, Errors r, Query String, ZLIB eb Modules	7
	Bo In Ro Bo In W Ca	potstrap Introduction, Gesponsive Layoutstrap Basic mbotron oper fells, Badge arousel, Progret troduction to stall Node.js Verst Example. Onsole, NPM: ode JS Basics affers, Stream secrtion, V8, Code JS and Meate Connecticution.	cootstrap: coduction etting Started, Gridout, Typography es Elements: I link, Button, But & Label, Panels, ess Bar, List Group, Node JS: Windows and Linux Package Manager, It s, File System, Pat Callbacks, Events, Pat SySQL: on, Create Database	ton Groups, Gr. Pagination, Page Dropdown, Colla , Modules, HTTP Node Globals, Note th, String Decode unycode, TTY, W. Create Table, Inc.	id, Table, Form, Alerter, Image, Glyphicon, pse, Tabs. Module, URL Module de.js OS, Timer, Errors r, Query String, ZLIB eb Modules	7
П	Bo In Ro Bo In W W Ca In In In In In In In In In In In In In	troduction, Gesponsive Layer otstrap Basic mbotron oper fells, Badge arousel, Progret troduction to stall Node.js Verst Example. Onsole, NPM: ode JS Basics affers, Stream esertion, V8, Code JS and Metate Connectic cord, Delete Is	cootstrap: coduction etting Started, Gridout, Typography es Elements: I link, Button, But & Label, Panels, ess Bar, List Group, Node JS: Windows and Linux Package Manager, I : s, File System, Pat Callbacks, Events, PaySQL:	ton Groups, Gr. Pagination, Page Dropdown, Colla , Modules, HTTP Node Globals, Note th, String Decode unycode, TTY, W. Create Table, Inc.	id, Table, Form, Alerter, Image, Glyphicon, pse, Tabs. Module, URL Module de.js OS, Timer, Errors r, Query String, ZLIB eb Modules	7
П	Be In Re Be Ju W Ca In In In Fi Co No. No. Ca Re Re Re Re Re Re Re Re Re Re Re Re Re	troduction, Gesponsive Layer of the East of Ea	cootstrap: coduction etting Started, Gricout, Typography es Elements: a link, Button, But & Label, Panels, ess Bar, List Group, Node JS: Windows and Linux Package Manager, I : s, File System, Pat Callbacks, Events, Pat ySQL: on, Create Database Record, Select Reco	ton Groups, Gr Pagination, Page Dropdown, Colla t, Modules, HTTP Node Globals, Noo th, String Decode unycode, TTY, W	id, Table, Form, Alerter, Image, Glyphicon, pse, Tabs. Module, URL Module de.js OS, Timer, Errors r, Query String, ZLIB eb Modules sert Record, Update Drop Table	7
II	Book In Robot Robo	cotstrap Introduction, Gresponsive Layer Dotstrap Basic mbotron oper fells, Badge arousel, Progrest troduction to stall Node.js Verst Example. Onsole, NPM: Dode JS Basics offers, Stream section, V8, Code JS and Metate Connection of the cord, Delete FeactJS troduction, T	cootstrap: coduction etting Started, Gridout, Typography es Elements: I link, Button, But & Label, Panels, ess Bar, List Group, Node JS: Windows and Linux Package Manager, It s, File System, Pat Callbacks, Events, Pat Callbacks, Pa	ton Groups, Gr. Pagination, Page Dropdown, Colla , Modules, HTTP Node Globals, Note th, String Decode unycode, TTY, W. P. Create Table, Intrd, Select Unique, JSX, Component	id, Table, Form, Alerter, Image, Glyphicon, pse, Tabs. Module, URL Module de.js OS, Timer, Errors r, Query String, ZLIB eb Modules sert Record, Update Drop Table ts, State and Props	7
П	Bo In Ro Bo In W Ca In In Bo In Ro Ca In Ro In Ro In In In In In In In In In In In In In	cotstrap Introduction, Gresponsive Layer Dotstrap Basic Modern oper Hells, Badge Arousel, Progrest troduction to Stall Node.js Verst Example. Onsole, NPM: Ode JS Basics Offers, Stream Secretion, V8, Code JS and Moderate Connection of Code Code Code Code Code Code Code Code	cootstrap: coduction etting Started, Gridout, Typography es Elements: a link, Button, Butt & Label, Panels, ess Bar, List Group, Node JS: Windows and Linux Package Manager, I : s, File System, Pat Callbacks, Events, Pat Callbacks, Events, Pat CySQL: on, Create Database Record, Select Reco Cemplating using components, Rende	ton Groups, Gr Pagination, Page Dropdown, Colla c, Modules, HTTP Node Globals, Noo th, String Decode unycode, TTY, W c, Create Table, In- rd, Select Unique, JSX, Componen- ring List and Po	id, Table, Form, Alerter, Image, Glyphicon, pse, Tabs. Module, URL Module de.js OS, Timer, Errors r, Query String, ZLIB eb Modules sert Record, Update Drop Table	7

	Python Framework	yak ayla ya a ku u waka adda dalah dalah kata ku ta dalah ku u waka ku u waka ku u ku ka ka dalah ku uku waka k
V	Introduction to Django, Installation of Django, The Basics of Dynamic, Web Pages, The Django Template System, Interacting with a Database: Models, The Django Administration Site, Form Processing, File Handling Email Functionalities, Sessions and Cookies	6
VI	Ruby On Rails Introduction, RVM(ruby version manager), Working in Linux(Ubuntu) Platform, Ruby Operators & Ruby Shell, Ruby Data types & Variables, Ruby methods and modules, OOP in Ruby, Basic loops and iterators Rails Rails Installation and Ruby gems, Databases, Statements, RAILS Model, Controller, and Views	7
	Text Books	
1	Benjamin Jakobus, "Mastering Bootstrap 4", Packt Publisher, 2nd Edition, 2018	
2	Jake Spurlock, "Bootstrap: Responsive Web Development", O'Reilly Publication, 2013	lication, 1st
3	Ethan Brown, "Web Development using Node and Express", O'Really Publisher, 2014.	1st Edition,
	References	
1	Daniel Rubio," Beginning Django Web Application Development and Deplo Python", ApressPublication,1st Edition,2017	yment with
2	Michael Hartl," Ruby on Rails 3 Tutorial Learn Rails by Example", Pearson Publication,1 st Edition,2010	1 Education
	Useful Links	
1	https://www.tutorialsteacher.com/nodejs/nodejs-tutorials	
2	https://morioh.com/p/656c3d9c1bce	
3	https://www.tutorialrepublic.com/twitter-bootstrap-tutorial/	
4	https://morioh.com/p/11c3e757a913	
5	https://www.djangoproject.com/start/	

						CO-I	PO Ma	apping						
ARRANA NEW MARIA MARIA MARIA MARIA MARIA MARIA MARIA MARIA MARIA MARIA MARIA MARIA MARIA MARIA MARIA MARIA MARIA	Programme Outcomes (PO)												PS	0
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	anne de la come mei, song de la dep a _{n e} n demanditripo perso	-,4		Medicinal And Sadinova, St. Sederica d		***************************************			1	Consideration of the Constitution of the Const	A	arakorus obiak wi Afrik Marek - bu Uk	2	yangan at him a bir atgan yan ingilalir yi yang mga
CO2		ter e con commune en en en en en en en en en en en en e	2		2					***************************************				3
CO3		***************************************	2	angless and an all a section with a	3									3

Assessment

Assessm	ent Plan based	on Bloom's Taxon	omy Level	
Bloom's Taxonomy Level	T1	T2	ESE	Total
Remember	Not Allowed	Not Allowed	Not Allowed	Not Allowed
Understand	5	5	10	20
Apply	10	5	15	30
Analyze	5	5	15	25
Evaluate		5	15	20
Create			5	5
Total	20	20	60	100

ergere distinuen debbet er demenden men erven.	one di en un indication phin en en emission del			ege of Engineeri	· -						
			CATERED STATES AND STATES CONTRACTOR OF THE ANGIOR SPACE AND ADDRESS OF THE STATES OF	Y 2021-22	ATTACHUME)						
				se Information							
Progr	amme		B.Tech. (Informa	200 Part 200		**************************************					
Class,	***********		Final Year b. Tec								
Cours			SIT333			HANDERSON I I MARKETO APPENDA METERALIZA COM TRANSPORTA PARENTO I DA PERSONO I DA P					
Cours			Professional Elec	tive - 2: 5G Tech	mology						
.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		uisites:	Computer Netwo	CONTRACTOR CONTRACTOR		f and frame (and the control of the first against the confidence of the first (commences one)					
		Scheme	m.d	hay consideration where the constraint and constrai	Scheme (Marks)	Total					
Lectu		3 Hrs/week	T1								
Tutor	tradition of produce an extensive manners of particular works.		20	20	60	100					
Practi		-				000 to 500 \$6 000 to 1000 \$600 \$600 \$600 \$600 \$600 \$600 \$600					
Intera	ction			CI	edits: 3						
			Cou	rse Objectives							
1	To in	troduce the ev	olution of mobile o			N					
2	To el	aborate the ke	y innovations in 50	inetworks							
3			mize the 5G networ	**************************************	S	Annual An					
			rse Outcomes (CO								
At the	end of		e students will be a			and the second s					
CO1			olution of 5G netwo	challenges	Analyze						
CO2				sical and functional architecture							
CO3											
	1		**************************************		ton Paragram upon 1 strangent of a plantation as and making the adult Al-Miller a Marineth (1941) Al-Miller Miller						
Modu	le		Modu	le Contents		Hours					
	Iı	ntroduction V	Vireless Communi	cation:							
Ι	I Evolution of wireless Communication Standards From 2G to 5G, Merits										
	aı	nd Demerits of	emerits of 2G, 3G, 4G								
		ntroduction to				_					
II					enarios, Ultra reliable	7					
- (\$1.011 Medicine) - 14444 14 - 41 14 44 45 - 14		PARTITION OF THE PARTIT	nmunication, Desig	ning 5G new rad	10						
***		Vaveform Des		Warrafamaa in 20	C AC 5C Warrafama						
III					G, 4G, 5G, Waveforms	6					
ananana mmoo een oo			mparison of wavefo	orms	THE CONTRACTOR CONTRACTOR AND ADDRESS OF THE PROPERTY OF THE P						
13.7		G Carriers ar			1 . 1	7					
IV	- 1				and adaptive subcarrier	7					
		andwidth, Cha ignal Process	nnel models for per	normance evalua							
v	1	_	~	e Diversity) and	Capacity, Hybrid beam						
٧		orming (mmW		Living, and	capacity, rijoria coam	7					
		hallenges in 5		en et sammann senna et ik den de dit a sette debide a manere recommitte strettende et es dit samt et disease	kakat metamankan katalan menengan di mengan pengangan pengan ACCUPATION AND DESCRIPTION OF THE STATE OF T						
				nentation.Deployi	ing hybrid LTE-NR is						
VI					nd for extensive 5G						
					estment requirements,	6					
		egulations on		-							
				Text Books							
1					G Mobile and Wireless						
**************			echnology", Cambi								
2	Jonat	than Rodrique	z, "Fundamentals o	of 3G Mobile Net	works", Wiley, 2015						
			1	References							
	Patrio	ck Marsch, On			ro Boldi, "5G System De	esion —					
1					Term Research", Wiley						
			U	seful Links							

Module I, II, III, IV, V https://nptel.ac.in/courses/108/105/108105134/

1

						CO-I	PO Ma	pping									
		Programme Outcomes (PO)													PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3		
CO1	3		1				A CATALON OF PROPERTY OF THE PARTY OF THE PA		}	THE THE PERSON TO SERVICE	PERSONAL PROPERTY AND AND ASSESSMENT		2	***************************************			
CO2		2					*************************	-ti,dret-co-completo-co-ingeneralistica-		anne ta estambane e e l'impere	an indicate and contribute and coloring and an experience and coloring				Ì		
CO3	2		1		Control to the contro			THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS O	l heligheitendami a mengenennya yapanana	***************************************	99 (A) 1914 (C) 40 POLATE A (C) (C) (C) (C)			1			

The strength of mapping is to be written as 1,2,3; Where, 1:Low, 2:Medium, 3:High Each CO of the course must map to at least one PO.

Assessment

Bloom's Taxonomy Level	T1	T2	ESE	Total
Remember	Not Allowed	Not Allowed	Not Allowed	Not Allowed
Understand	5	5	10	20
Apply	10	5	15	30
Analyze	5	5	15	25
Evaluate	1947 t. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	5	15	20
Create	mages agreemently of Victorial Victorial Victorial and Market Arches and Arches Arches (Market Victorial Arches		5	5
Total	20	20	60	100

				ege of Engineering, ided Autonomous In		
	hades to the William Property of the Land			AY 2021-22	Silver	ramakan, sadari sandan kada kirik kirik kirik sada alam sir dalahiri 19 silwah Al-V
	200			rse Information		
Progra	amme	3	B.Tech. (Informat		aggiga karistinaanin andaraktuu Montonatein in settää suuristanteen kun sent 1 aukuven mannasta 1940 (Monton Monton	
Class,	Committee of the Committee of the		Third Year B. Tec	h., Sem VI		and in the second section of the second seco
Course	Paris Africano Company Company		5IT 33 4			
Course			Professional Elect	ive - 2: Mathematics	for Machine Learning	Peringental in the second control to the control of
)esire	d Re	quisites:			engennsking fallig fallig i koluntura internation occur yn arin a rikura bedrii in koluntur in yn yn it yn yn y	
Te	achir	ig Scheme		Examination S	cheme (Marks)	
ectur		3 Hrs/week	T1	T2	ESE	Total
'utori	al	-	20	20	60	100
ractio	cal	-				
ntera	ction	_		Cred	lits: 3	
			Co-	ırse Objectives		
1	Toi	ntroduce linear		s for machine learning	10	
2				eduction for machine		
3			zed model for real-ti			
3	100	A A		D) with Bloom's Ta	xonomy Level	
t the	end o		e students will be ab			
CO1				hine learning algorit	hms	Apply
CO2			algorithms for dimer			Analyse
CO3	Į.	^		tic algorithms in mac	chine learning	Evaluate
Modu				Iule Contents		Hours
I	-	fundamental sul	and subspaces, basis bspaces.	and dimensions, li	near transformation, four	6
II		properties, least	nces, eigenvalues are squared and minim	um normed solution	ecial Matrices and their ons. SVD: Properties and chmidt process, polar	7
uncente manare me e e comitare heri		Dimensions Re	duction Algorithm	S:	er far far far far far far far far far fa	The control of the co
III		and Jordan cand		ar discriminant analy	ysis, minimal polynomial	7
IV	-	jacobian, hessia	_	derivatives, gradienterations and its	t, directional derivatives, s properties.	7
V		for constrained descent metho minimizing LPI	and unconstrained d, Penalty function	l optimization: Nev	l optimization techniques wton's method, Steepest uction to SVM, Error gin classifiers.	6
VI		independence,	theorem of total		pility, Bayes' theorem, tion and variance, few and co-variance.	7
1000000000				T 4D-1		
1	W. 200			Text Books hematics", New You	rk: Springer Science+Busi	ness Media

	References
1	All Modules taken from below link course. https://onlinecourses.nptel.ac.in/noc21_ma38/
	Useful Links
1	https://www.classcentral.com/course/swayam-introduction-to-machine-learning-5288
2	https://web.stanford.edu/~hastie/Papers/ESLII.pdf
3	http://users.isr.ist.utl.pt/~wurmd/Livros/school/Bishop%20- %20Pattern%20Recognition%20And%20Machine%20Learning%20- %20Springer%20%202006.pdf

						CO-1	PO Ma	apping							
	Programme Outcomes (PO)													PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1	3		1						***************************************	Ì	****		2		
CO2		2				THE CONTRACTOR OF THE PROPERTY.	****************	***************************************	and the first and the first state and are specified as		· WARRANT BRANCH BUT STORY OF				
CO3	2		1	All deaths and the second perspenses, ye , a	/*************************************	***************************************		***************************************					The photo order on the Administration of the	1	

Assessment

Assessm	ent Plan based	on Bloom's Taxon	omy Level	
Bloom's Taxonomy Level	T1	Т2	ESE	Total
Remember	Not Allowed	Not Allowed	Not Allowed	Not Allowed
Understand	5	5	10	20
Apply	10	5	15	30
Analyze	5	5	15	25
Evaluate	AM 10 10 10 10 10 10 10 10 10 10 10 10 10	5	15	20
Create	Control of the contro		5	5
Total	20	20	60	100

Alemana en exercica en al Ambierte en en en en la enferir de	errenan karameterren Europe errena			ege of Engineerin		
			en en en en en en en en en en en en en e	ided Autonomous I AY 2021-22	INSTITUTE)	
THE STATE OF THE S				se Information		
D			· · · · · · · · · · · · · · · · · · ·			
Progra			B.Tech. (Informat		эм дамин хүүн байгаан хууу байгаан хууу байгаан хууу дагаан хууу дагаан хууу хууу хууу хууу хууу хууу хууу х	
Class,	***************	***************************************	Third Year B. Tec	al., Sem vi		
Cours		AND AND AND AND AND AND AND AND AND AND	5TT335	·		
Cours		CONTRACTOR OF STREET			ns and Applications	
Desire	a Keq	uisites:	Computer Networ	KS	ennument of the policy of the second of the	
Te	achin	g Scheme		Examination	Scheme (Marks)	
Lectur	re	3 Hrs/week	T1	T2	ESE	Total
Tutori	ial		20	20	60	100
Practi	cal	-				
Intera	ction			Cr	edits: 3	
-1	m.:	1		rse Objectives		
1			s applications of Intuition of internet in n		sensor networks	
3	f		communication thr	A RESIDENCE OF THE PROPERTY OF		
J	TOAL	NA CONTRACTOR DE LA CONTRACTOR DE CONTRACTOR	irse Outcomes (CC			
At the	end of	Management of States from Section and Association and Associat	students will be ab	and a second contract of the second contract	AAUHUHIY LEVEI	
CO1			contributed to the e			Apply
CO2			Raspberry Pi to dev		one on cloud	Apply
CO2			pplication using cor		JIIS OII CIOUU	Create
CO3	Desig	gn 101 based a	ppireation using cor	mpontentis		
Modu	le		Modu	le Contents		Hours
		ntroduction to				The state of the s
I			on, Basics of Netwo	orking, Communic	ation Protocols	7
TT		ensor Networl				7
II	M	Iachine-to-Mad	hine Communication	ons, Interoperabilit	y in IoT	equary designs & marchines do 100 a march on a toda of AMITA AMARA COMMISSION CONTRACTOR
			T Programming:			
III					troduction to Python	7
111			ntroduction to Raspb	erry Pi, Implemen	itation of IoT with	,
		aspberry Pi				ELEVAN E DESERVE CENTRAL SELECTION DE LA CONTRAL DE LA CON
	Iı	itroduction to	SDN:			_
IV			ata Handling and An	nalytics, Cloud Con	mputing, Sensor-Cloud,	6
		og Computing				
		OT Applicatio		, 137114 6		
V	1		l Smart Homes, Con	nected Vehicles, S	Smart Grid, Industrial	6
		T				novel new with review to the control of MANA, Albania & Management Superior And AWAA Spring Science
VI	C	ase Study: Ag	riculture, Healthcar	e, Activity Monito	ring	6
				aga mara aga nga nga nga nga nga nga nga nga ng		6
			r	Text Books		
	Arah	deen Bohan or			hings: A Hands-on Appro	oach" VPT 1st
1		on, 2014	d vijay K. Madisei	iii, internet of ir	ungs. A Hunus-on Appro	ouch, vii, i
2			"The internet of thi	nos" MIT Press 1	1st Edition, 2015	
<u> </u>	Louin	Orongara,	LIVE VINCTING OF HILL			
				References		
	Pethi	ıru Rai and An		A A STATE OF THE RESERVE OF THE PROPERTY OF TH	ings: Enabling Technolo	gies, Platforms.
1			RC Press, 1 st edition		3	C 2
					nternet Of Things", Wile	ey, 1 st Edition,
2	2013					-
to a composition of the state of models of the state of	aliren aperieran erroren error					
			I	J seful Links		
1	https	://onlinecourse	s.nptel.ac.in/noc19_	cs65/preview		NO. 17 J. Wallet Harry Company of the Mandal Mandal Mandal Mandal Mandal
		A SAME OF THE STAT	A CONTRACTOR OF THE CONTRACTOR			

						CO-I	PO Ma	pping	The second	- 1 T						
		Programme Outcomes (PO)												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2		
CO1	1		2										2			
CO2			3			to the name of the latest own that the town.			Without the commence down	Andrew Colonia and Consultant Con	0.000000000000000000000000000000000000	THE RESERVE OF THE PARTY OF THE			***************************************	
CO3	2	ANT PLAN IS NOT A TANBAS IN THE PARTY.							The Control of the Co		1	2		3		

Assessment

Assessm	ent Plan based	on Bloom's Taxon	iomy Level	
Bloom's Taxonomy Level	T1	Т2	ESE	Total
Remember	Not Allowed	Not Allowed	Not Allowed	Not Allowed
Understand	5	5	10	20
Apply	10	5	15	30
Analyze	5	5	15	25
Evaluate		5	15	20
Create		and the state of t	5	5
Total	20	20	60	100

			llege of Engineering				
		(Government 2	AY 2021-22				
		Cou	rse Information				
Programme	P		tion Technology)		-		
Class, Seme		Third Year B. Te					
Course Coo	CONTRACTOR OF THE CONTRACTOR AND ADDRESS OF THE CONTRACTOR OF THE	50E392	VIII. VI				
Course Nar	· · · · · · · · · · · · · · · · · · ·		Web Development	and Applications			
		Computer Progra		and Applications	يناه بيناها و مدمد في مقاول في مديد و مداول في المراجعة من أن مع ما مداول من المعاول من المداول المداو		
Desired Rec	quisites:	Computer Progra	manng	ж эт зак и дел дел в подержения подержения страния и применення в подержения подержения в подержения в подержен	g garagidos la plan gazidolo de la hiji gilipag jir da chang ji ili dologishana garaga, agaza changa ya and a a a anadi		
Tasabia	- Cak	I s		Sahama (Marika)			
Lecture	ig Scheme 2 Hrs/week	T1		Scheme (Marks)	Total		
	Z HIS/Week	T1	T2	ESE	10tai 100		
Tutorial		20	20	60	100		
Practical	N LUT BAT MADE LE CHE PRANCINE PER COMMUNICATION AND INVESTIGATION AND INVESTIGATION AND INVESTIGATION AND AND AND AND AND AND AND AND AND AN		A CHRISTIAN MANUSCHI MANUS				
Interaction			Cre	dits: 2			
		ALL THE PROPERTY OF THE PROPER	urse Objectives				
	NO COMPANY DE LO COMPANY DE LO COMPANY DE LA	nentals of web desi					
			atic web page designage for dynamic pag				
3 To e	epontalis action reproducing a resident and reproducing the contract of the co	ran a managaran karangan pertambahan menangan kanggaran panggaran panggaran panggaran panggaran panggaran pang	age for dynamic pag O) with Bloom's Ta				
At the end o		e students will be al		ахоношу Levei			
aranical and a second a second and a second		nedia elements in v	AP ANTHER STATE OF THE PARTY OF		Apply		
			g for web application	ns	Apply		
and a second contraction and the contraction of the		eb services for web			Analyse		
				and a supplication of the			
Module		Mod	lule Contents		Hours		
	ntroduction to	Internet and Wel	b:				
I	nternet, Web,	Server Client mod	lel, Internet vs. web	o, Web Browsers, Web			
I	Page Addresses	(URLs), Anatomy	of a web page, Do	efining web design, the	4		
r	nedium of the	web, Types of w	veb sites, Web Des	ign themes. Web Page			
H	Hosting	•					
******	HTML and CS	S :	an manamanakan mengan arawa mekalikan manamatan dan meliliki dalah dalah dalah dalah dalah mendeliki dan besida delah s	AND THE PROPERTY AND AND AND THE PROPERTY AND THE AND ADDRESS AND			
1			dding text, adding	images, Table markup,			
		onts, commenting					
	imple HTML fo	•	, ,, <u></u> , <u></u>	, , , , ,,	5		
1	•	•	to CSS, basic synt	ax and structure, using			
1				anipulating texts, using			
1	,	•	padding lists, position				
	KML			Company of the control of the contro			
		KML, uses of XML	, simple XML, and	XML key components,			
1		•	, ,	lication. XML, XSL and	4		
2	KSLT. Introduct	ion to XSL, XML	transformed simple	example, XSL			
		orming with XSL		AND THE LOCAL PROPERTY AND AND AND AND AND AND AND AND AND AND			
1	PHP						
11/		· ·	-	ontrolling program flow,	4		
\	_	• •		PHP Forms, Content	•		
		tem: WordPress, D	Prupal, Joomla	gggg, war no ggi nag king ggg, ng ng pingliphow as a jo na a an jinada nasad hiji ni nina an ninin na an da da da na milika ka sasada na ninin na na ninin na na ninin na na ninin na na ninin na na ninin na na ninin na na ninin na na ninin na na ninin na n			
J	avaScript:						
				tions and Expressions,			
				ts, Object Creation and	4		
1	Modification, A	ification, Arrays, Functions, Constructors, Pattern Matching, Positioning					
	Marring on 1 M.	inging Elements	constructors, rattern	i Matching,i Ostronnig			

V	Web Services And Web application Introduction to Web Service, Web Services Basics – Creating, Publishing, WSDL, SOAP, RSS, Web Application, examples of web applications.	4	
	Text Books		
1	Jennifer Niederst Robbins "Learning Web Designing", O'Reilly Publications", 5th E	dition 2018	
2	Thomas A. Powell "Web Design: The Complete reference" Mc Graw Hill/ Osborne 2000		
3	Robin Nixon, "Learning PHP, MySQL, JavaScript, and CSS: A Step-by-Step Guid Dynamic Websites", O'Reilly Publications, 3rd Edition, 2014	e to Creating	
1	References		
2	Erik T. Ray "Learning XML" O'Reilly Publications, 1st Edition, 2001 Chris Bates, "Web Programing Building Internet Applications", WILEY, Dreamtech 2000	2nd Edition,	
	Useful Links		
1	https://www.coursera.org/learn/web-development#syllabus		
2	https://www.coursera.org/learn/duke-programming-web#syllabus		
3	https://www.javatpoint.com/php-tutorial		
4	https://www.javatpoint.com/xml-tutorial	THE COLUMN THE PROPERTY OF THE PARTY OF THE	
5	https://www.softwaretestinghelp.com/web-services-tutorial/	area out and a second a second and a second	

		9.55				CO-I	PO Ma	apping						
	Programme Outcomes (PO)								PS	O				
THE THE STREET STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET,	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1					The William of Baltimore and the Section Secti	Aur Publish be T Marijak umum dalar	TOTAL STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET,		1				2	
CO2		All and the state of the state	2	TOTAL PROPERTY OF THE PERSON NAMED OF	2									3
CO3			2	en PP enn hafter skal skare, e op een e a ver	3	THE STREET, ST	Charles (Victo Barba & Araba No.,						CONTOURABLE BUILDING	3

Assessment

Assessm	ent Plan based	on Bloom's Taxon	omy Level	
Bloom's Taxonomy Level	T1	Т2	ESE	Total
Remember	Not Allowed	Not Allowed	Not Allowed	Not Allowed
Understand	5	5	10	20
Apply	10	5	15	30
Analyze	5	5	15	25
Evaluate		5	15	20
Create		each deads being conducted by the service services and services at 11 and 100	5	5
Total	20	20	60	100

			e <mark>ge of Engineerin</mark> ided Autonomous 1					
		ALL CALLED THE STATE OF THE STA	AY 2021-22	isitive)				
			se Information					
Programme		B.Tech. (Informati			S CONTROL OF THE CONT			
Class, Seme		Third Year B. Tec		ONE TENDRO AND RESIDENCE CONTROL AND RESIDENCE AND RESIDENCE AND RESIDENCE SET OF THE ATTACK A				
Course Cod		50E 393		ala banagia con 1888 (1811) con banda Madel Andriado anticol Lad Alberta (1864-1874) (1844-1871). Esti estigat carpo a procedura tra	**************************************			
Course Nan		Open Elective - 4:	Machine I earning					
Desired Rec		Opon Licenve - 4.	wacmine Dearming	Amount 1 garage and the programming of the socker mineral shirts Amount 1911 of the Santa American				
DCSII CU IXCU	Madres.							
Teachin	g Scheme		Examination	Scheme (Marks)				
Lecture	3 Hrs/week	T1	T2	ESE	Total			
Futorial	_	20	20	60	100			
Practical		and the second section of the second						
nteraction	•		Cre	edits: 3				
COLUMN 2014 (1884) 1984 (1884) 1884 (1884) 1884 (1884) 1884 (1884) 1884 (1884) 1884 (1884) 1884 (1884) 1884 (1884)	y kaja ya ya manaya ya ntre de la companie de la companie de la companie de la companie de la companie de la companie de la companie		enement and the second and the secon					
		Cou	rse Objectives					
1 To e	xplain the conc			ine learning techniqu	es.			
		is machine learning a						
				machine learning tec	hniques.			
		urse Outcomes (CO			Company of the Compan			
At the end o	f the course, the	e students will be ab	le to,					
		machine learning	g algorithms for	Regression and	Analyze			
Clas	sification.			NAMES AND ADDRESS OF THE PROPERTY OF THE PROPE	AND THE RESIDENCE OF THE PROPERTY OF THE PROPE			
		earning algorithm fo		Named the first state of the st	Apply			
CO3 Eval	uate Machine I	Learning algorithms	with performance	parameters.	Analyze			
Module		Module	Contents		Hours			
1	ntroduction:							
	robability The	7						
**************************************	Decision Theor							
	Regression:							
	inear Regressi	7						
N	Methods, Princi	,						
		Logistic Regression,	Linear Discriminai	nt Analysis.				
1	rtificial Neur							
	ntroduction, Ea	6						
	nitialization, Ti							
	lgorithms:	n :	~	0.70. 1				
1		Regression Trees, S						
1	unctions, Categ	6						
1		 Instability Evaluati 	ion Measures, Supp	port Vector				
	lachines,							
1	earning Theo	-	71 Tourston 42 3.4	January DOC				
V 1		cross Validation, C			7			
C		nsemble Methods - B	agging, Committe	e iviacinnes and	7			
	tacking, Boost		amaille mongramdier i a molocustiqui delicir i i i i i i i i i i i i i i i i i i					
	lustering:	tering, Hierarchical (Throtonine Dinet A	loogithm CUDE	7			
,		6						
P	agontum, Den	sity-based Clustering		ar non ann an Ann Ann agus a Fhail Ann agus ann an Ann an Thuis ann an Fhail an Ann an				
			r.=4 D1					
Т	or Heatin Dal		Fext Books	"The Elements of Sta	atistical Lacroin-			
	or Hastie, Roc nger, 2nd Edition		ne fi. ffiedman,	the Diements of Ma	uisucai Learning			
1 C	iver and Editio	DEL /1819						
¹ Sprii				anderstand, mentre a linear and have the state and a large model the end of the first of the first of the entire including (this state) is the first of the entire including (this state) is the entire including (this state) is the entire including the entire inc	er angline y mandrag ngan mandade na yan angkan mangapagan mandada mandada angka angkan mangapan dagan mananan			
Sprii			References					

	Useful Links
1	https://www.classcentral.com/course/swayam-introduction-to-machine-learning-5288
2	https://web.stanford.edu/~hastie/Papers/ESLII.pdf
	http://users.isr.ist.utl.pt/~wurmd/Livros/school/Bishop%20-
3	%20Pattern%20Recognition%20And%20Machine%20Learning%20-
	%20Springer%20%202006.pdf

		CO-PO N	lapping						
a extremely fourthful gast folial and a tolerable of which a store of a store of the store of th	19 Year Table 19 The State of t	Programme Outcomes (PO)							
	PO1	PO2	PO3	PO4	PO5	PO6			
CO1	19-22-19-94-19-30 of Salahari G. Halahari Milahari ada Mahishari ada bangga ce mpamangan ng		1						
CO2	2	1		2	2	Commission of the Commission o			
CO3	3	and the second section of the second	2	**************************************		WFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF			

Assessment

Bloom's Taxonomy Level	T1	T2	ESE	Total
Remember	Not Allowed	Not Allowed	Not Allowed	Not Allowed
Understand	5	5	10	20
Apply	10	5	15	30
Analyze	5	5	15	25
Evaluate		5	15	20
Create			5	5
Total	20	20	60	100

