

#### SRK INSTITUTE OF TECHNOLOGY Enikepadu, Vijayawada, 521108 Approved by AICTE, Affiliated to JNTUK, Kakinada (ISO 9001:2015 Certified Institution) Department of Computer Science and Engineering

#### **TENTATIVE LESSON PLAN:R1922051**

	SEACB	Date: 22-03-2020		Page N	lo :00	
Revision 1	00: oV	Prepared By: G.Koteswa	ramma	Appro	oved By: HOD	
Tools: Bla						
		s of data science and its importanc				
	ental of Math	ematical Statistics" by S. C. G				
No. of		TOPIC	DAT	E	Mode of Delivery	
Periods	TINITED T IN					
		escriptive statistics and metho	ds for data	a .		
1.	Science	e and introduction to statistics				
2.	Population Collection	The state of the s				
			Fron			
4. 5.		a and secondary data	22/3/2			
Э.		iables: dependent and	72/3/2 To		Lecture	
6.	Catagorical		10/4/2		interspersed	
7.	Data visual	and continuous variables.	10/7/2	021	with	
	Dette Fronti	alletto za			discussions	
8.		f central tendency				
9.		an,mode,G.M,H.M.				
10.		f variability.				
11.		tile deviation, mean				
12.	Skewness a	tandard deviation.				
13.	Revision	nd kurtosis				
15.		Correlation and curve fitting				
CO2. Inter		ation of characteristics and thro	uah aarrala	tion		
and regress		ation of characteristics and thro	ugii correta	ion		
		ncepts of probability and their a	nnlications			
		nematical Statistics" by S. C.				
Kapoor,	United Of Ivanta	remarked by 5. C.	oupa an	W VARA		
14.	Correlation					
15.	Correlation	coefficient				
16.		coefficient problems				
17.		ation, problems				
18.		coefficients				
19.	Regression					
20.	Regression		From	n	Lecture	
21.		east squares	12/4/2	021	interspersed	
22.	Straight line		To		with	
23.	Parabola, pr		1/5/20	)21	discussions	
and the second second second	- A	curves, power curves				
24.		curves, power curves				
24. 25.	1	V V				
	problems.					
	problems. Revision					

Capoor,	nental Of Mathematical Statistics"By S. C.		Lecture
27.	Definition of probability.	are are a server a secretario de la company de la comp	interspersed
28.	Conditional probability and their problems.	The second secon	with discussions
29.	Baye's theorem and their problems.		
30.	Random variables		
31.	Discrete random variables.	From	
32.	problems.	3/5/2021	
33.	Continuous random variables	To	
34.	problems.	29/5/2021	
35.	Distribution function		
36.	problems		
37.	Mathematical expectation and variance		
38.	problems		
39.	Binomial distribution		
40.	Poisson distribution		
41.	Uniform distribution		
42.	Normal distribution		
43.	problems		
	UNIT IV: Sampling theory		
44.	Population and samples Sampling distribution of means and		
45.	Sampling distribution of means and		
	variances(definition only)		
46.	Central limit theorem (without proof)		
47.	Introduction to t distribution		Lecture
48.	Introduction to chew square distribution		interspersed
49.	Introduction to,F-distributions	Γ.	with
	Point and interval distribution	From	
50.		31/6/2021	discussions
51.	problems		discussions
51. 52.	Maximum error of estimate.	To	discussions
51. 52. 53.	Maximum error of estimate. problems		discussions
51. 52.	Maximum error of estimate.  problems  Sampling distribution of means and	To	discussions
51. 52. 53. 54.	Maximum error of estimate.  problems  Sampling distribution of means and variances(definition only)	To	discussions
51. 52. 53.	Maximum error of estimate.  problems  Sampling distribution of means and variances(definition only)  problems	To	discussions
51. 52. 53. 54.	Maximum error of estimate.  problems  Sampling distribution of means and variances(definition only)  problems  UNIT V:Tests of hypothesis	To 19/6/2021	discussions
51. 52. 53. 54. 55.	Maximum error of estimate.  problems  Sampling distribution of means and variances(definition only)  problems  UNIT V:Tests of hypothesis or the statistical inferential methods based on	To 19/6/2021	discussions
51. 52. 53. 54. 55. CO6: Infe	Maximum error of estimate.  problems  Sampling distribution of means and variances(definition only)  problems  UNIT V:Tests of hypothesis or the statistical inferential methods based on	To 19/6/2021 In small and large	discussions
51. 52. 53. 54. 55. CO6: Inferampling the "Fundam Kapoor,"	Maximum error of estimate.  problems  Sampling distribution of means and variances(definition only)  problems  UNIT V:Tests of hypothesis or the statistical inferential methods based on ests  tental Of Mathematical Statistics"By S. C.	To 19/6/2021 In small and large	discussions
51. 52. 53. 54. 55. CO6: Inferance to the control of the control o	Maximum error of estimate.  problems  Sampling distribution of means and variances(definition only)  problems  UNIT V:Tests of hypothesis  r the statistical inferential methods based on ests  tental Of Mathematical Statistics"By S. C.  Introduction	To 19/6/2021 In small and large	discussions
51. 52. 53. 54. 55. CO6: Infeampling to "Fundam (apoor, 56. 57.	Maximum error of estimate.  problems  Sampling distribution of means and variances(definition only)  problems  UNIT V:Tests of hypothesis  r the statistical inferential methods based on ests  tental Of Mathematical Statistics"By S. C.  Introduction  Hypothesis	To 19/6/2021 In small and large	discussions
51. 52. 53. 54. 55. CO6: Infeampling terminal te	Maximum error of estimate.  problems  Sampling distribution of means and variances(definition only)  problems  UNIT V:Tests of hypothesis or the statistical inferential methods based on ests  tental Of Mathematical Statistics"By S. C.  Introduction  Hypothesis  Null and alternative hypothesis	To 19/6/2021 In small and large	discussions
51. 52. 53. 54. 55. CO6: Infeampling to "Fundam Capoor, 56. 57.	Maximum error of estimate.  problems  Sampling distribution of means and variances(definition only)  problems  UNIT V:Tests of hypothesis  r the statistical inferential methods based on ests  tental Of Mathematical Statistics"By S. C.  Introduction  Hypothesis	To 19/6/2021 In small and large	discussions

62.	Tests concerning one mean and two eans	From	
69.	Tests concerning one mean and two eans	27/6/2021	Lecture
70	Large and small samples	To	interspersed
71.	Tests on proportion	10/7/2021	with
72.	Tests on proportion		discussions
73.	Problems		
74.	Revision		

G. Koteswaramna Faculty Signatute HOD Signature

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# Enikepadu, Vijayawada 521108 Department of Computer Science Engineering TENTATIVE LESSONPLAN

#### **TENTATIVE LESSONPLAN: R1922052**

Course Title: JAVA P	ROGRAMMING	
Section: CSE A & B	Date : 6/4/2021	Page No : 01 of 05
Revision No: 00	Prepared by: E. NAGARAJU	Approved by : HOD

Tools: Black board, PPTs, MS TEAMS APP

UNIT 1: Program Structure in Java: Introduction, Writing Simple Java Programs, Elements or Tokens in Java Programs, Java Statements, Command Line Arguments, User Input to Programs, Escape Sequences Comments, Programming Style.

Data Types, Variables, and Operators: Introduction, Data Types in Java, Declaration of Variables, Data Types, Type Casting, Scope of Variable Identifier, Literal Constants, Symbolic Constants, Formatted Output with printf() Method, Static Variables and Methods, Attribute Final, Introduction to Operators, Precedence and Associativity of Operators, Assignment Operator (=), Basic Arithmetic Operators, Increment (++) and Decrement (--) Operators, Ternary Operator, Relational Operators, Boolean Logical Operators, Bitwise Logical Operators. Control Statements: Introduction, if Expression, Nested if Expressions, if else Expressions, Ternary Operator?:, Switch Statement, Iteration Statements, while Expression, do while Loop, for Loop, Nested for Loop, For Each for

Loop, Break Statement, Continue Statement.

No. of periods	TOPIC	Date	Mode of Delivery
1.	Program Structure in Java: Introduction, Writing Simple Java Programs	6/4/2021	
2.	Elements or Tokens in Java Programs	6/4/2021	
3.	Java Statements	8/4/2021	
4.	Command Line Arguments, User Input to Programs	10/4/2021	
5.	Escape Sequences Comments, Programming Style	12/4/2021	
6.	Data Types, Variables, and Operators :Introduction, Data Types in Java, Declaration of Variables, Data Types	12/4/2021	Lecture interspersed
7.	Type Casting, Scope of Variable Identifier, Literal Constants, Symbolic Constants	15/4/2021	with
8.	Formatted Output with printf() Method, Static Variables and Methods, Attribute Final	16/4/2021	discussions & online
9.	Introduction to Operators, Precedence and Associativity of Operators	17/4/2021	classes with MS Teams
10.	Assignment Operator ( = ), Basic Arithmetic Operators, Increment (++) and Decrement () Operators	19/4/2021	App
11.	TernaryOperator, Relational Operators	20/4/2021	
12.	Boolean Logical Operators, Bitwise Logical Operators	21/4/2021	
13.	Control Statements: Introduction, if Expression, Nested if Expressions, if-else Expressions	22/4/2021	
14.	Ternary Operator?:, Switch Statement, Iteration	24/4/2021	



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	Statements, while Expression, do-while Loop	
15.	for Loop, Nested for Loop, For-Each for Loop	26/4/2021
16.	Break Statement, Continue Statemen	27/4/2021
17.	TUTORIAL CLASS	28/4/2021

UNIT 2: Classes and Objects: Introduction, Class Declaration and Modifiers, Class Members, Declaration of Class Objects, Assigning One Object to Another, Access Control for Class Members, Accessing Private Members of Class, Constructor Methods for Class, Overloaded Constructor Methods, Nested Classes, Final Class and Methods, Passing Arguments by Value and by Reference, Keyword this. Methods: Introduction, Defining Methods, Overloaded Methods, Overloaded Constructor Methods, Class Objects as Parameters in Methods, Access Control, Recursive Methods, Nesting of Methods,

Overriding Methods, Attributes Final and Static

No. of periods	TOPIC	Date	Mode of Delivery
18.	Classes and Objects: Introduction, Class Declaration and Modifiers, Class Members, Declaration of Class Objects	29/4/2021	
19.	Assigning One Object to Another, Access Control for Class Members, Accessing Private Members of Class	31/4/2021	
20.	Constructor Methods for Class, Overloaded Constructor Methods	1/5/2021	Lecture interspersed
21.	Nested Classes, Final Class and Methods,	4/5/2021	
22.	Passing Arguments by Value and byReference, Keyword this	5/5/2021	
23.	Methods: Introduction, Defining Methods, Overloaded Methods, Overloaded Constructor Methods	6/5/2021	
24.	Class Objects as Parameters in Methods, Access Control	7/5/2021	online
25.	Recursive Methods, Nesting of Methods	8/5/2021	classes with
26.	Overriding Methods, Attributes Final and Static	18/5/2021	MS Teams
		19/5/2021	App
27.	TUTORIAL CLASS	20/5/2021	

UNIT 3: Arrays: Introduction, Declaration and Initialization of Arrays, Storage of Array in Computer Memory, Accessing Elements of Arrays, Operations on Array Elements, Assigning Array to Another Array, Dynamic Change of Array Size, Sorting of Arrays, Search for Values in Arrays, Class Arrays, Two-dimensional Arrays, Arrays of Varying Lengths, Three-dimensional Arrays, Arrays as Vectors.

Inheritance: Introduction, Process of Inheritance, Types of Inheritances, Universal Super Class-Object Class, Inhibiting Inheritance of Class Using Final, Access Control and Inheritance, Multilevel Inheritance, Application of Keyword Super, Constructor Method and Inheritance, Method Overriding, Dynamic Method Dispatch, Abstract Classes, Interfaces and Inheritance. Interfaces: Introduction, Declaration of Interface, Implementation of Interface, Multiple Interfaces, Nested Interfaces, Inheritance of Interfaces, Default Methods in Interfaces, Static Methods in Interface, Functional



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No. of periods	TOPIC	Date	Mode of Delivery
28.	Arrays: Introduction, Declaration and Initialization of Arrays, Storage of Array in Computer Memory	21/5/2021	
29.	Accessing Elements of Arrays, Operations on Array Elements	22/5/2021	
30.	Assigning Array to Another Array, Dynamic Change of Array Size	24/5/2021	Lecture
31.	Sorting of Arrays	25/5/2021	interspersed online
32.	Search for Values in Arrays	26/5/2021	classes with
33.	Class Arrays, Two-dimensional Arrays, Arrays of Varying Lengths	27/5/2021	MS Teams
34.	Three-dimensional Arrays, Arrays as Vectors	29/5/2021	App
35.	Inheritance: Introduction, Process of Inheritance, Types of Inheritances	31/5/2021	
36.	Universal Super ClassObject Class, Inhibiting	1/6/2021	
	Inheritance of Class Using Final Access Control and Inheritance, Multilevel Inheritance, Application of Keyword Super	2/6/2021	
37.	Constructor Method and Inheritance, Method Overriding, Dynamic Method Dispatch	4/6/2021	
38.	Abstract Classes, Interfaces and Inheritance	5/6/2021	
39.	TUTORIAL CLASS	7/6/2021	

UNIT 4: Packages and Java Library: Introduction, Defining Package, Importing Packages and Classes into Programs, Path and Class Path, Access Control, Packages in Java SE, Java.lang Package and its Classes, Class Object, Enumeration, class Math, Wrapper Classes, Auto-boxing and Autounboxing, Java util Classes and Interfaces, Formatter Class, Random Class, Time Package, Class Instant (java.time.Instant), Formatting for Date/Time in Java, Temporal Adjusters Class, Temporal Adjusters Class.

Exception Handling: Introduction, Hierarchy of Standard Exception Classes, Keywords throws and throw, try, catch, and finally Blocks, Multiple Catch Clauses, Class Throwable, Unchecked Exceptions, Checked Exceptions, try-with-resources, Catching Subclass Exception, Custom Exceptions, Nested try and catch Blocks, Rethrowing Exception, Throws Clause.

No. of periods	ТОРІС	Date	Mode of Delivery
40.	Packages and Java Library: Introduction, Defining Package, Importing Packages and Classes into Programs, Path and Class Path	8/6/2021	
41.	Access Control, Packages in Java SE, Java.lang Package and its Classes, Class Object, Enumeration	9/6/2021	
42.	class Math, Wrapper Classes, Auto-boxing and	10/6/2021	



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	Autounboxing		
43.	Java util Classes and Interfaces, Formatter Class,	11/6/2021	
	Random Class		
44.	Time Package, Class Instant (java.time.Instant),	12/6/2021	
	Formatting for Date/Time in Java		Lecture
45.	Temporal Adjusters Class, Temporal Adjusters Class.	14/6/2021	interspersed
	Exception Handling: Introduction, Hierarchy of		online
	Standard Exception Classes		classes with
46.	Keywords throws and throw, try, catch, and finally	15/6/2021	MS Teams
	Blocks		
47.	Multiple Catch Clauses, Class Throwable, Unchecked	16/6/2021	App
	Exceptions, Checked Exceptions		
48.	try-with-resources, Catching Subclass Exception,	17/6/2021	
	Custom Exceptions		
49.	Nested try and catch Blocks, Rethrowing Exception,	18/6/2021	
	Throws Clause		
50.	Tutorial class	19/6/2021	

UNIT 5: String Handling in Java: Introduction, Interface Char Sequence, Class String, Methods for Extracting Characters from Strings, Methods for Comparison of Strings, Methods for Modifying Strings, Methods for Searching Strings, Data Conversion and Miscellaneous Methods, Class String Buffer, Class String Builder.

Multithreaded Programming: Introduction, Need for Multiple Threads Multithreaded Programming for Multi-core Processor, Thread Class, Main Thread- Creation of New Threads, Thread States, Thread Priority-Synchronization, Deadlock and Race Situations, Inter-thread Communication - Suspending, Resuming, and Stopping of Threads.

Java Database Connectivity: Introduction, JDBC Architecture, Installing MySQL and MySQL Connector/J, JDBC Environment Setup, Establishing JDBC Database Connections, ResultSet Interface, Creating JDBC Application, JDBC Batch Processing, IDBC Transaction Management

No. of periods	TOPIC	Date	Mode of Delivery
51.	String Handling in Java: Introduction, Interface Char Sequence, Class String	21/6/2021	
52.	Methods for Extracting Characters from Strings	22/6/2021	
53.	Methods for Comparison of Strings, Methods for Modifying Strings	24/6/2021	
54.	Methods for Searching Strings, Data Conversion and Miscellaneous Methods	25/6/2021	
55.	Class String Buffer, Class String Builder, Multithreaded Programming: Introduction, Need for Multiple Threads	26/6/2021	
56.	Multithreaded Programming for Multi-core Processor, Thread Class, Main Thread- Creation of New Threads, Thread States	28/6/2021	
57.	Thread Priority-Synchronization, Deadlock and Race	29/6/2021	



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	Situations		
58.	Inter-thread Communication - Suspending, Resuming, and Stopping of Threads,	30/6/2021	Lecture
59.	Java Database Connectivity: Introduction	1/7/2021	interspersed
60.	JDBC Architecture,	2/7/2021	online
61.	Installing MySQL and MySQL Connector/J	3/7/2021	classes with
62.	JDBC Environment Setup,	5/7/2021	MS Teams
63.	Establishing JDBC Database Connections	5/7/2021	App
64.	ResultSet Interface, Creating JDBC Application,	6/7/2021	
65.	JDBC Batch Processing, JDBC Transaction Management	7/7/2021	
66.	Tutorial class	8/7/2021	

#### **TEXT BOOKS:**

1) JAVA one step ahead, Anitha Seth, B.L.Juneja, Oxford.

2) The complete Reference Java, 8th edition, Herbert Schildt, TMH.

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# Enikepadu, Vijayawada 521108 Department of Computer Science Engineering TENTATIVE LESSONPLAN

#### TENTATIVE LESSONPLAN: R1922053

Course Title: OPERA	TING SYSTEMS	
Section: CSE A & B	Date : 6/4/2021	Page No : 01 of 03
Revision No: 00	Prepared by: M VENKATA LAKSHMI	Approved by : HOD

Tools: Black board, PPTs, MS TEAMS

#### UNIT 1: Operating Systems Overview, System Structures.

CO1: To understand the internal operation of modern operating systems from different views and system calls generated inside the system from user and kernel.

TB: Silberschatz A, Galvin P B, and Gagne G, "Operating System Concepts", 9th edition, Wiley, 2013.

No. of periods	TOPIC	Date	Mode of Delivery
1.	Introduction to Operating Systems and Overview,	6/4/2021	
2.	Operating system functions	6/4/2021	
3.	Operating system structure,	8/4/2021	
4.	Operating systems operations,	10/4/2021	
5.	Computing environments, Open-Source Operating Systems.	12/4/2021	
6.	System Structures: Operating System Services,	12/4/2021	Online
7.	User and Operating-System Interface,	15/4/2021	classes with
8.	Systems calls,	16/4/2021	ms teams
9.	Types of System Calls,	17/4/2021	
10.	system programs,	19/4/2021	
11.	operating system structure,	20/4/2021	
12.	operating system debugging,	21/4/2021	
13.	System Boot, Tutorial	22/4/2021	

#### UNIT 2: Process Concept, Process Scheduling, IPC.

CO2: To define, explain, processes, threads, CPU scheduling algorithms, Inter Process Communication between processes, and IPC Problems.

**TB:** Tanenbaum A S, "**Modern Operating Systems**", 3rd edition, Pearson Education, 2008. (for Interprocess Communication and File systems.)

No. of periods	TOPIC	Date	Mode of Delivery
14.	Process Concept: Process scheduling	24/4/2021	
15.	Operations on processes,	26/4/2021	1
16.	Inter-process communication,	27/4/2021	
17.	Communication in client server systems.	28/4/2021	



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18.	Multithreaded Programming: Multithreading models,	29/4/2021	
19.	Thread libraries, Threading issues.	31/4/2021	
20.	Process Scheduling: Basic concepts,	1/5/2021	
21.	Scheduling criteria,	4/5/2021	
22.	Scheduling algorithms,	5/5/2021	
		6/5/2021	
23.	Multiple processor scheduling, Thread scheduling.	7/5/2021	Online Class
24.	Inter-process Communication: Race conditions, Critical Regions,	8/5/2021	with MS Teams
25.	Mutual exclusion with busy waiting, Sleep and wakeup,	18/5/2021	
26.	Semaphores,	19/5/2021	
27.	Mutexes, Monitors,	20/5/2021	
28.	Message passing, Barriers,	21/5/2021	
29.	Classical IPC Problems - Dining philosophers problem,	22/5/2021	
30.	Classical IPC Problems -Readers and writers problem.	24/5/2021	
31.	Tutorial	25/5/2021	

#### UNIT 3: Memory-Management Strategies, Virtual Memory Management.

CO 3: To understand the memory management, how to create dynamic memory and different memory allocation techniques.

TB: Silberschatz A, Galvin PB, and Gagne G, "Operating System Concepts", 9th edition, Wiley, 2013

No. of periods	TOPIC	Date	Mode of Delivery
32.	Memory-Management Strategies: Introduction,	26/5/2021	
33.	Swapping,	27/5/2021	
34.	Contiguous memory allocation,	29/5/2021	
35.	Paging,	31/5/2021	
36.	Segmentation.	1/6/2021	
37.	Virtual Memory Management: Introduction, Demand paging,	2/6/2021	Online Class with MS
38.	Copy on-write,	4/6/2021	Teams
39.	Page replacement,	5/6/2021	
40.	Page replacement algorithms	7/6/2021	
		8/6/2021	
41.	Frame allocation, Thrashing,	9/6/2021	
42.	Memory-mapped files, Kernel memory allocation.	10/6/2021	
43.	Tutorial	11/6/2021	

UNIT 4: Deadlocks, File Systems, Secondary-Storage Structure.

CO4: To understand Deadlock and recovery, Input Output Management in file system and use of



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Device Driver and Secondary Storage (Disk) Mechanism .

TB: Silberschatz A, Galvin PB, and Gagne G, "Operating System Concepts", 9th edition, Wiley, 2013

No. of periods	TOPIC	Date	Mode of Delivery
44.	Deadlocks: Resources, Conditions for resource deadlocks,	12/6/2021	
45.	Deadlock avoidance	14/6/2021	
46.	Deadlock prevention	15/6/2021	
47.	Deadlock detection and recovery and Ostrich algorithm,	16/6/2021	
48.	Deadlock prevention.	17/6/2021	
49.	File Systems: Files,	18/6/2021	
50.	Directories,	19/6/2021	Online Class
51.	File system implementation,	21/6/2021	with MS
52.	File- Management and optimization.	22/6/2021	Teams
53.	Secondary-Storage Structure: Overview of disk structure,	24/6/2021	
54.	Disk Attachment, Disk scheduling	25/6/2021	
55.	Disk scheduling algorithms	26/6/2021	
56.	RAID Structure,	28/6/2021	
57.	Stable storage implementation.	29/6/2021	
58.	Tutorial	30/6/2021	

**UNIT 5: System Protection, System Security** 

CO5: To analyze Security and Protection Mechanism in Operating System from various views. TB: Silberschatz A, Galvin P B, and Gagne G, "Operating System Concepts", 9th edition, Wiley. 2013

No. of periods	TOPIC	Date	Mode of Delivery
59.	System Protection: Goals of protection,	1/7/2021	
60.	Principles and domain of protection,	2/7/2021	
61.	Access matrix,	3/7/2021	
62.	Access control, Revocation of access rights.	5/7/2021	
63.	System Security: Introduction,	6/7/2021	Online Class
64.	Program threats, System and network threats,	7/7/2021	with MS
65.	Cryptography for security,	8/7/2021	Teams
66.	User authentication,	9/7/2021	
67.	Implementing security defenses,	10/7/2021	
68.	Firewall to protect systems and networks,	11/7/2021	
69.	Computer security classification,	12/7/2021	
70.	Tutorial	13/7/2021	

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Course Title: Data Base Management System

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Department of Computer Science and Engineering

#### TENTATIVE LESSON PLAN

Data Base Management System (R1922054)

Section	: II/II	Date: 06/4/21	Page No: 01 of 03		
CSE :A					
Revision	Revision No: 00   Prepared By: SRILAKSHMI. K   Appr		Appro	ved By: HOD	
Tools: B	Tools: Black board, PPTs, Moodle				
No. of	f TOPIC I		Date	Mode of Delivery	
Periods					
UNIT -I	An (	Overview of Database Management			
CO1: Des	scribe a	relational database and object-oriented d	latabase.		
TB: Intr	oduction	to Database Systems, CJ Date, Pearson			
1.	Introdu	ction- What is Database System			
2.	What is	Database, Why Database			
3.	Data In	dependence			
4.	Relatio	n Systems and Others			
5.	The Th	ree Levels of Architecture- The External	From: 07/4/21	Online Class with	
J.	Level, t	the Conceptual Level, the Internal Level	To:15/4/21	MS Teams	
6.	Mappin	ng, Database Administrator			
7.	The Da	tabase Management Systems			
8.	Client/S	Server Architecture			
10	Tutoria	al			

No. of Periods	TOPIC	Date	<b>Mode of Delivery</b>
UNIT -I	I Relational Model		
CO2: De	escribe ER model and normalization for database	design.	
TB: Int	roduction to Database Systems, CJ Date, Pearson		
11	Relational Model: Introduction to relational model		
12	concepts of domain, attribute		Online Class with MS Teams
13	tuple, relation		
14	importance of null values		
15	constraints (Domain, Key constraints, integrity constraints)	From: 16/4/21 To: 30/4/21	
16	BASIC SQL: Simple Database schema, data types, table definitions (create, alter)		
17	different DML operations (insert, delete, update)		
18	basic SQL querying (select and project) using where clause		

19,20	arithmetic & logical operations		
21	SQL functions(Date and Time, Numeric, String conversion).		
22	Tutorial		
UNIT -	III Queries, Constraints, Triggers		
CO3: C	reate, maintain and manipulate a relational datab	ase using SQL	
	Data base Management Systems, Raghurama		nnes Gehrke, TATA
	w Hill 3rd Edition		
23	Entity Relationship Model: Introduction		
24	Representation of entities, attributes, entity set		
25	relationship, relationship set		
26	constraints, sub classes, super class,		
27	inheritance, specialization,		
28	generalization using ER Diagrams		
29	SQL: Creating tables with relationship	From:1/05/21	
30	implementation of key and integrity constraints	to 15/5/21	Online class with
31	nested queries, sub queries		MS Teams
32	grouping, aggregation, ordering		
32	implementation of different types of joins		
33	view(updatable and non-updatable), relational set operations.		
34	Tutorial		

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT -I	V Schema Refinement (Normalization)		
CO4: De	escribe ER model and normalization for data	abase design.	
	roduction to Database Systems, CJ Date, Pea	arson	
No. of Periods	TOPIC	Date	Mode of Delivery
35	Introduction to Normalization or		
36	schema refinement		
37	Purpose of Normalization		
38	Advantages of Normalization		
39	functional dependency		
40	First normal form		
41	Second normal form	- 15/5/01	Online stars with MG
42	Third normal form	From: 17/5/21 to 3/6/21	Online class with MS Teams
43,44	Concept of surrogate key	10 0, 0, 2	Touris
45	Boyce-codd normal form(BCNF)		
46	Lossless join		
48	dependency preserving decomposition		
49	Fourth normal form(4NF)		
50	Fifth normal form(5NF)		

51	Tutorial	T	
UNIT -	V Transaction Management and Concurrence	y Control:	
CO5: U	Inderstand the role and issues in managemen	t of data such	as efficiency, privacy,
	, ethical responsibility, and strategic advantage		
	roduction to Database Systems, CJ Date, Pearson	n	
52	Transaction Concept: Transaction State		
53	Implementation of Atomicity and Durability		
54	Concurrent Executions		
55	Serializability	1	
56	Recoverability	1	
57	Implementation of Isolation		
58	Testing for Serializability		
59	Failure Classification,		
60	Storage		
61	Recovery and Atomicity		
62	Recovery algorithm.	From: 4/6/21	
63,64	Indexing Techniques: B+ Trees	to 3/7/21	Online class with MS
65	Search, Insert		Teams
66	Delete algorithms		
67	File Organization and Indexing		
68	Cluster Indexes		
69	Primary and Secondary Indexes		
70	Index data Structures Hash Based Indexing:		
71	Tree base Indexing		
72	Comparison of File Organizations, Indexes and Performance Tuning		
73	Tutorial		

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Client/Server Architecture

Tutorial

8.

10

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Department of Computer Science and Engineering

### TENTATIVE LESSON PLAN Data Base Management System (R1922054)

Course T	itle: Dat	a Base Management System			
Section		Date: 06/4/21		Page N	lo:01 of 03
CSE :B					
Revision	No:00	Prepared By: SRILAKSHMI. K		Appro	ved By: HOD
Tools: B	lack boa	rd, PPTs, Moodle			
No. of		TOPIC	Dat	te	Mode of Delivery
Periods					
UNIT -I	An (	Overview of Database Management			
CO1: De	scribe a	relational database and object-oriented o	database.		
TB: Intr	roduction	to Database Systems, CJ Date, Pearson			
1.	Introdu	ction- What is Database System			
2.	What is	Database, Why Database			
3.	Data In	dependence			
4.	Relatio	n Systems and Others			
5.	The Th	ree Levels of Architecture- The External	From: 0	7/4/21	Online Class with
٥.	Level,	the Conceptual Level, the Internal Level	To:15/	4/21	MS Teams
6.	Mappir	ng, Database Administrator			
7.	The Da	tabase Management Systems			

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT -	II Relational Model		
CO2: Do	escribe ER model and normalization for database	design.	
TB: Int	roduction to Database Systems, CJ Date, Pearson		
11	Relational Model: Introduction to relational model		
12	concepts of domain, attribute		
13	tuple, relation		Online Class with
14	importance of null values		
15	constraints (Domain, Key constraints, integrity constraints)	From: 16/4/21	
16	BASIC SQL: Simple Database schema, data types, table definitions (create, alter)	To: 30/4/21	MS Teams
17	different DML operations (insert, delete, update)		
18	basic SQL querying (select and project) using where clause		

19,20	arithmetic & logical anarotions		1
19,20	arithmetic & logical operations		
21	SQL functions(Date and Time, Numeric, String		
	conversion).		
22	Tutorial		
UNIT -	III Queries, Constraints, Triggers		
CO3: C	reate, maintain and manipulate a relational datab	ase using SQL	
<b>TB</b> :.	Data base Management Systems, Raghurama	Krishnan, Johan	nnes Gehrke, TATA
McGrav	v Hill 3rd Edition		
23	Entity Relationship Model: Introduction		
24	Representation of entities, attributes, entity set		
25	relationship, relationship set		
26	constraints, sub classes, super class,		
27	inheritance, specialization,		
28	generalization using ER Diagrams		
29	SQL: Creating tables with relationship	From:1/05/21	
30	implementation of key and integrity constraints	to 15/5/21	Online class with
31	nested queries, sub queries		MS Teams
32	grouping, aggregation, ordering		
32	implementation of different types of joins		
33	view(updatable and non-updatable), relational set operations.		
34	Tutorial		

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT -I	V Schema Refinement (Normalization)		
CO4: De	escribe ER model and normalization for data	abase design.	
TB: Int	roduction to Database Systems, CJ Date, Per	arson	
No. of Periods	TOPIC	Date	Mode of Delivery
35	Introduction to Normalization or		
36	schema refinement		
37	Purpose of Normalization		
38	Advantages of Normalization		
39	functional dependency		
40	First normal form		
41	Second normal form	- 1-1-1-1	
42	Third normal form	From: 17/5/21 to 3/6/21	Online class with MS Teams
43,44	Concept of surrogate key	10 3/0/21	Teams
45	Boyce-codd normal form(BCNF)		
46	Lossless join		
48	dependency preserving decomposition		
49	Fourth normal form(4NF)		
50	Fifth normal form(5NF)		

51	Tutorial		
UNIT -	V Transaction Management and Concurrence	y Control:	
	Inderstand the role and issues in managemen	t of data such	as efficiency, privacy,
	, ethical responsibility, and strategic advantage		
52 TB: Int	roduction to Database Systems, CJ Date, Pearson Transaction Concept: Transaction State	n 	
53	Implementation of Atomicity and Durability	-	
54	Concurrent Executions	-	
55	Serializability	4	
56	Recoverability		
57	Implementation of Isolation		
58	Testing for Serializability		
59	Failure Classification,	1	Online class with MS
60	Storage		
61	Recovery and Atomicity	1	
62	Recovery algorithm.	From: 4/6/21	
63,64	Indexing Techniques: B+ Trees	to 3/7/21	
65	Search, Insert	1	Teams
66	Delete algorithms	1	
67	File Organization and Indexing		
68	Cluster Indexes	1	
69	Primary and Secondary Indexes	1	
70	Index data Structures Hash Based Indexing:	1	
71	Tree base Indexing	1	
72	Comparison of File Organizations, Indexes and Performance Tuning		
73	Tutorial		

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#### **TENTATIVE LESSON PLAN: R1922055**

#### FORMAL LANGUAGES AND AUTOMATA THEORY

Course- Formal Languages and Automata Theory				
Section: Sec A & B	Date: 6/4/2021	Page No: 01 of 04		
Revision No: 00	Prepared By: Dr.B.Ashalataha	Approved By: HOD		

Tools: Black Board, PPTs

No. of	f Periods Topic Date	e	Mode of Delivery
Unit-	1 Finite Automata		
CO1:	To Classify machines by their power t	o recognize lang	guages.
<b>TB:</b> "	Introduction to Automata Theory, Lan	nguages and Co	mputation,
J.E.H	loperoft, R.Motwani and J.D.Ullman, 3	rd Edition, Pea	rson, 2008. "
1	Need of Automata theory, Central	6/4/20	21
	Concepts of Automata Theory,		
	Automation, Finite Automation		
2	Transition Systems, Acceptance of a	8/4/20	21
	String, DFA		
3	Design of DFAs	10/4/20	D21 Lecture
4	NFA, Design of NFA, Equivalence of	of 12/4/20	interspersed
	DFA and NFA		with
5	Conversion of NFA into DFA	15/4/20	discussions
6	Finite Automata with E-Transitions,	Automata with E-Transitions, 16/4/2021	
	Minimization of Finite Automata		
7	Finite Automata with output-Mealy	17/4/20	021
	and Moore Machines	19/4/20	021
8	Applications and Limitation of Finite	e 20/4/20	021
	Automata.	21/4/20	021
9	Tutorial	22/4/20	021
UNIT	Γ-II: Regular Expressions		<b>_</b>
CO2:	: To Summarize language classes & gr	ammars relation	nship among them
with 1	the help of Chomsky hierarchy.		
	Introduction to Automata Theory, La		
J.E.H	Ioperoft, R.Motwani and J.D.Ullman, 3		
1	Regular Expressions, Regular Sets,	24/4/20	
	Identity Rules	26/4/20	021
2	Equivalence of two RE, Manipulation		
	of REs	28/4/2	021 Lecture

2	F: '4- A-441D1	20/4/2021	1
3	Finite Automata and Regular	29/4/2021	interspersed
1	Expressions, Inter Conversion	30/4/2021	with
4	Equivalence between FA and RE,	1/5/2021	discussions
	Pumping Lemma of Regular Sets	4/5/2021	
5	Closure Properties of Regular Sets,	5/5/2021	
	Grammars	6/5/2021	
6	Classification of Grammars, Chomsky	7/5/2021	
	Hierarchy Theorem	8/5/2021	
7	Right and Left Linear Regular	10/5/2021	
	Grammars	11/5/2021	
8	Equivalence between RG and FA, Inter	12/5/2021	
	Conversion	13/5/2021	
9	Tutorial	15/5/2021	
UNIT	-III Context Free Grammars		
CO3:	Employ finite state machines to solve prob	lems in computin	g.
	Theory of Computer Science-Automata, La		
	Mishra and N.Chandrasekharan, 3rd Edit		_
1	Formal Languages, Context Free	17/5/2021	
1	Formal Languages, Context Free Grammar, Leftmost and Rightmost	18/5/2021	
1	Grammar, Leftmost and Rightmost Derivations		
	Grammar, Leftmost and Rightmost Derivations	18/5/2021	
2	Grammar, Leftmost and Rightmost Derivations Parse Trees, Ambiguous Grammars		Lecture
2	Grammar, Leftmost and Rightmost Derivations Parse Trees, Ambiguous Grammars Simplification of Context Free	18/5/2021 19/5/2021	
2	Grammar, Leftmost and Rightmost Derivations Parse Trees, Ambiguous Grammars Simplification of Context Free Grammars-Elimination of Useless	18/5/2021	
2	Grammar, Leftmost and Rightmost Derivations Parse Trees, Ambiguous Grammars Simplification of Context Free Grammars-Elimination of Useless Symbols, E-Productions and Unit	18/5/2021 19/5/2021	interspersed
2 3	Grammar, Leftmost and Rightmost Derivations  Parse Trees, Ambiguous Grammars Simplification of Context Free Grammars-Elimination of Useless Symbols, E-Productions and Unit Productions	18/5/2021 19/5/2021 20/5/2021	interspersed with
2 3	Grammar, Leftmost and Rightmost Derivations  Parse Trees, Ambiguous Grammars Simplification of Context Free Grammars-Elimination of Useless Symbols, E-Productions and Unit Productions Normal Forms-Chomsky Normal Form	18/5/2021 19/5/2021 20/5/2021 21/5/2021	interspersed with
2 3 4 5	Grammar, Leftmost and Rightmost Derivations  Parse Trees, Ambiguous Grammars Simplification of Context Free Grammars-Elimination of Useless Symbols, E-Productions and Unit Productions Normal Forms-Chomsky Normal Form Greibach Normal Form	18/5/2021 19/5/2021 20/5/2021	interspersed with
2 3 4 5	Grammar, Leftmost and Rightmost Derivations Parse Trees, Ambiguous Grammars Simplification of Context Free Grammars-Elimination of Useless Symbols, E-Productions and Unit Productions Normal Forms-Chomsky Normal Form Greibach Normal Form Pumping Lemma, Closure Properties,	18/5/2021 19/5/2021 20/5/2021 21/5/2021 22/5/2021	interspersed with
2 3 4 5	Grammar, Leftmost and Rightmost Derivations  Parse Trees, Ambiguous Grammars Simplification of Context Free Grammars-Elimination of Useless Symbols, E-Productions and Unit Productions Normal Forms-Chomsky Normal Form Greibach Normal Form Pumping Lemma, Closure Properties, Applications of Context Free	18/5/2021 19/5/2021 20/5/2021 21/5/2021	interspersed with
2 3 4 5 6	Grammar, Leftmost and Rightmost Derivations  Parse Trees, Ambiguous Grammars Simplification of Context Free Grammars-Elimination of Useless Symbols, E-Productions and Unit Productions Normal Forms-Chomsky Normal Form Greibach Normal Form Pumping Lemma, Closure Properties, Applications of Context Free Grammars	18/5/2021 19/5/2021 20/5/2021 21/5/2021 22/5/2021 24/5/2021	interspersed with
2 3 4 5 6	Grammar, Leftmost and Rightmost Derivations  Parse Trees, Ambiguous Grammars Simplification of Context Free Grammars-Elimination of Useless Symbols, E-Productions and Unit Productions Normal Forms-Chomsky Normal Form Greibach Normal Form Pumping Lemma, Closure Properties, Applications of Context Free	18/5/2021 19/5/2021 20/5/2021 21/5/2021 22/5/2021	interspersed with
2 3 4 5 6	Grammar, Leftmost and Rightmost Derivations  Parse Trees, Ambiguous Grammars Simplification of Context Free Grammars-Elimination of Useless Symbols, E-Productions and Unit Productions Normal Forms-Chomsky Normal Form Greibach Normal Form Pumping Lemma, Closure Properties, Applications of Context Free Grammars Tutorial  -IV: Pushdown Automata	18/5/2021 19/5/2021 20/5/2021 21/5/2021 22/5/2021 24/5/2021 24/5/2021	interspersed with
2 3 4 5 6 7 UNIT CO4:	Grammar, Leftmost and Rightmost Derivations Parse Trees, Ambiguous Grammars Simplification of Context Free Grammars-Elimination of Useless Symbols, E-Productions and Unit Productions Normal Forms-Chomsky Normal Form Greibach Normal Form Pumping Lemma, Closure Properties, Applications of Context Free Grammars Tutorial  -IV: Pushdown Automata Illustrate deterministic and non-determinis	18/5/2021  19/5/2021  20/5/2021  21/5/2021  24/5/2021  24/5/2021  24/5/2021  atic machines.	interspersed with discussions
2 3 4 5 6 7 UNIT CO4: TB:"	Grammar, Leftmost and Rightmost Derivations Parse Trees, Ambiguous Grammars Simplification of Context Free Grammars-Elimination of Useless Symbols, E-Productions and Unit Productions Normal Forms-Chomsky Normal Form Greibach Normal Form Pumping Lemma, Closure Properties, Applications of Context Free Grammars Tutorial  -IV: Pushdown Automata Illustrate deterministic and non-determinis Introduction to Automata Theory, Language	18/5/2021  19/5/2021  20/5/2021  21/5/2021  22/5/2021  24/5/2021  24/5/2021  stic machines. ges and Computa	interspersed with discussions
2 3 4 5 6 7 UNIT CO4: TB:"	Grammar, Leftmost and Rightmost Derivations  Parse Trees, Ambiguous Grammars Simplification of Context Free Grammars-Elimination of Useless Symbols, E-Productions and Unit Productions Normal Forms-Chomsky Normal Form Greibach Normal Form Pumping Lemma, Closure Properties, Applications of Context Free Grammars Tutorial  -IV: Pushdown Automata Illustrate deterministic and non-determinis Introduction to Automata Theory, Languagopcroft, R.Motwani and J.D. Ullman, 3rd Editations	18/5/2021  19/5/2021  20/5/2021  21/5/2021  22/5/2021  24/5/2021  24/5/2021  atic machines.  ges and Computa  lition, Pearson, 2	interspersed with discussions
CO4: TB:"	Grammar, Leftmost and Rightmost Derivations Parse Trees, Ambiguous Grammars Simplification of Context Free Grammars-Elimination of Useless Symbols, E-Productions and Unit Productions Normal Forms-Chomsky Normal Form Greibach Normal Form Pumping Lemma, Closure Properties, Applications of Context Free Grammars Tutorial  -IV: Pushdown Automata Illustrate deterministic and non-determinis Introduction to Automata Theory, Language	18/5/2021  19/5/2021  20/5/2021  21/5/2021  22/5/2021  24/5/2021  24/5/2021  stic machines. ges and Computa	interspersed with discussions

2	Instantaneous Description, Language	27/5/2021	
	Acceptance of Pushdown Automata	28/5/2021	
3	Design of Pushdown Automata, Deterministic and Non – Deterministic Pushdown Automata	29/5/2021 31/5/2021 Lectu	
4	Equivalence of Pushdown Automata and Context Free Grammars,  Conversion	e of Pushdown Automata htext Free Grammars, 1/6/2021	
5	Two Stack Pushdown Automata	2/6/2021 4/6/2021	
6	Application of Pushdown Automata	5/6/2021 7/6/2021	
7	Tutorial	8/6/2021	

**UNIT-V: Turning Machine** 

CO5: Quote the hierarchy of problems arising in the computer science.

TB: Theory of Computer Science-Automata, Languages and Computation,

K.L.P.Mishra and N.Chandrasekharan, 3rd Edition, PHI, 2007

1	Definition, Model	9/6/2021	
		10/6/2021	
2	Representation of TMs-Instantaneous	11/6/2021	
	Descriptions	12/6/2021	
3	Transition Tables and Transition	14/6/2021	
	Diagrams	15/6/2021	
4	Language of a TM	16/6/2021	
		17/6/2021	
5	Design of TMs	18/6/2021	Lecture
		19/6/2021	interspersed
6	Design of TMs	21/6/2021	with
		22/6/2021	discussions
7	Design of TMs	24/6/2021	
		25/6/2021	
8	Types of TMs	25/6/2021	
		26/6/2021	
9	Types of TMs	28/6/2021	
		29/6/2021	
10	Church's Thesis	30/6/2021	

		1/7/2021
11	Universal and Restricted TM	2/7/2021
		3/7/2021
12	Decidable and Un-decidable Problems	4/7/2021
		5/7/2021
13	Halting Problem of TMs	6/7/2021
14	Post's Correspondence Problem	7/7/2021
15	Modified PCP	8/7/2021
16	Classes of P and NP	8/7/2021
17	NP-Hard and NP-Complete Problems	9/7/2021
18	Tutorial	

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Department of Computer Science and Engineering

		mputer Networks			
Section : A	1	Date : 5-6-2021	Page No:1	of 4	
Revision No	00:00	Prepared By : P.Bhagya Lakshmi	Approved I	By: HOD	
Tools: MS	Teams				
No. of		TOPIC	Date	Mode of	
Periods UNIT -I In				Delivery	
CO 1: Und	erstan	d OSI and TCP/IP models and David J Wetherall, Computer Networks,	5th Edition, Pear	rson Edu, 2010	
1.	Intr	oduction	7/4/21		
2.	Net	work Topologies	7/4/21	1	
-			8/4/21		
3.	LA	N	9/4/21		
4.	MA	N	10/4/21		
5.	WA	AN	12/4/21	Online class with MS Tean	
6.	OS	I Reference Model	13/4/21 to	with MS Team	
7.	TC	P/IP Model	15/4/21 16/4/21to	,	
7.	10	P/IP Model	17/4/21		
8.	Cor	mparison between OSI and TCP/IP	19/4/21		
9.	Tut	orial Class	20/4/21		
	baum :	cal Layer d about the physical layer in OSI reference m and David J Wetherall, Computer Networks, vsical Layer – Fourier Analysis: – Bandwidth nited Signals		rson Edu, 2010	
11.		Maximum Data Rate of Channel	23/4/21to	1	
11.	1110	Mannulli Pata Rate dia Challici	24/4/21		
12.	Gui	ided Transmission Media,	26/4/21 to		
			27/4/21	Online	
13.	Dig	rital Modulation	28/4/21	Online class with MS Team	
14.	Mu	ltiplexing: Frequency Division Multiplexing,	30/4/21	with MIS Team	
15.		ne Division Multiplexing,	1/5/21		
16.		le Division Multiplexing	3/5/21		
10.	100	Z. Dan Howhwall	JI JI ZI	1	

Data Link Layer Design Issues, Error Detection and

4/5/21



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19.	Sliding Window Protocols	6/5/21
20.	Tutorial Class	7/5/21

#### UNIT-III DATALINK LAYER

CO 3: Understand about the data link layer in OSI reference model

TB: Computer Networks: A Top Down Approach, Behrouz A. Forouzan, FirouzMosharraf,

	ill Education		
21.	The Data Link Layer - ServicesProvided to the Network Layer	8/5/21	
22.	Framing	10/5/21	
23.	Error Control – Flow Control,	11/5/21to12 /5/21	
24.	Error Detection and Correction	13/5/21	
25.	Error-Correcting Codes	14/5/21to16 /5/21	
26.	Error Detecting Codes,	17/5/21	Online class
27.	Elementary Data Link Protocols- A Utopian Simplex Protocol-	18/5/21	with MS Team
28.	A Simplex Stop and Wait Protocol for an Error free channel-	19/5/21	
29.	A Simplex Stop and Wait Protocol for a Noisy Channel,	20/5/21	
30.	Sliding Window Protocols-AOne Bit Sliding Window Protocol-	21/5/21	
31.	A Protocol Using Go-Back-N-	22/5/21to24 /5/21	
32.	A Protocol Using Selective Repeat	26/5/21	
33.	Tutorial class	27/5/21	

#### UNIT - IV The Medium Access Control Sublayer

CO 4: Analyze MAC layer protocols and LAN technologies

TB: Computer Networks: A Top Down Approach, Behrouz A. Forouzan, FirouzMosharraf, McGraw Hill Education

No. of Periods	TOPIC	DATE	Mode of Delivery
34.	The Medium Access Control Sublayer-The Channel Allocation Problem	28/5/21	
35.	Static Channel Allocation-Assumptions for Dynamic Channel Allocation,	29/5/21	
36.	Multiple Access Protocols-Aloha-	31/5/21	Online class with MS Teams
37.	Carrier Sense Multiple AccessProtocols-	1/6/21	
38.	Collision-Free Protocols	2/6/21	
39.	Limited Contention Protocols-	3/6/21	
40.	Wireless LAN Protocols,	4/6/21	
41.	Ethernet-Classic Ethernet PhysicalLayer-Classic	5/6/21	1



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	Ethernet		
42.	MAC Sublayer Protocol-EthernetPerformance-Fast Ethernet	7/6/21	
43.	Gigabit Ethernet-10-Gigabit Ethernet- Retrospective on Ethernet	8/6/21to 9/6/21	
44.	Wireless Lans-The 802.11Architecture	10/6/21to 11/6/21	
45.	Protocol Stack-The 802.11 Physical Layer	12/6/21	
46.	The802.11 MAC Sublayer Protocol	14/6/21to 15/6/21	
47.	The 805.11 Frame Structure-Services	16/6/21	
48.	Tutorial class	17/6/21	

#### **UNIT -V Network Layer**

CO 5: Understand routing and congestion control algorithms

TB: Tanenbaum and David J Wetherall, Computer Networks, 5th Edition, Pearson Edu, 2010

49.	Design Issues-The Network LayerDesign Issues -	18/6/21to2 1/6/21	
50.	Store and Forward Packet Switching-	22/6/21	
51.	Services Provided to the Transport Layer	23/6/21	0.1.
52.	Implementation of Connectionless Service-	24/6/21	Online class with MS Teams
53.	Implementation of Connection Oriented Service-	25/6/21	Wall to Tourns
54.	Comparison of Virtual Circuit and Datagram Networks,	26/6/21	
55.	Routing Algorithms-The Optimality principle	28/6/21	
56.	Shortest path Algorithm,	29/6/21	
57.	Congestion Control Algorithms	30/6/21	
58.	Approaches to Congestion Control-Traffic	1/7/21	
59.	Aware Routing-Admission	2/7/21	
60.	Control-TrafficThrottling-Load Shedding.	3/7/21	
61.	Tutorial Class	5/7/21	

#### UNIT -VI Transport Layer and Application Layer

CO 6: Understand how internet works.

TB: Tanenbaum and David J Wetherall, Computer Networks, 5th Edition, Pearson Edu, 2010

62.	Transport Layer – The Internet Transport Protocols: Udp,	6/7/21	
63.	The Internet Transport Protocols:Tcp	7/7/21 to 12/7/21	
64.	Application Layer - The Domain Name System:	13/7/21	
65.	The DNS Name Space, ResourceRecords,	14/7/21	
66.	Name Servers,	15/7/21	Online class
67.	Electronic Mail: Architecture and Services,	16/7/21	with MS Teams



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68.	The User Agent, Message Formats,	17/7/21 to
		22/7/21
69.	Message Transfer,	23/7/21
70.	Final Delivery	24/7/21
71.	Tutorial Class	26/7/21

P. Bhagya Lakshmi Signature of the Faculty 5/6/21

PRINCIPAL Signature of the HOD

SRK Institute of Technology ENIKEPADU. VIJAYAWADA-521 108



Enikepadu, Vijayawada, 521108 Approved by AICTE, Affiliated to JNTUK, Kakinada (ISO 9001:2015 Certified Institution) Department of Computer Science and Engineering

Course Tit	le : Computer Networks		
Section : I	B Date : 5-6-2021	Page No:1 o	of 4
Revision N	o:00   Prepared By: P.Bhagya Lakshmi	Approved E	By : HOD
	Teams,PPT		-
No. of Periods	TOPIC	Date	Mode of Delivery
CO 1: Und	ntroduction erstand OSI and TCP/IP models baum and David J Wetherall, Computer Network	ks, 5th Edition, Pear	rson Edu, 2010
1.	Introduction	7/4/21	
2.	Network Topologies	7/4/21	
2.	network ropologies	8/4/21	
3.	LAN	9/4/21	
4.	MAN	10/4/21	
5.	WAN	12/4/21	Online class with MS Tear
6.	OSI Reference Model	13/4/21 to 15/4/21	with was real
7.	TCP/IP Model	16/4/21to	
/.	TCI/II WOODI	17/4/21	
8.	Comparison between OSI and TCP/IP	19/4/21	
9.	Tutorial Class	20/4/21	
CO 2: Und	:Physical Layer erstand about the physical layer in OSI reference baum and David J Wetherall, Computer Networ	ks, 5th Edition, Pea	rson Edu, 2010
10.	Physical Layer – Fourier Analysis: – Bandwid Limited Signals	th 22/4/21	
11.	The Maximum Data Rate ofa Channel	23/4/21to 24/4/21	
12.	Guided Transmission Media,	26/4/21 to 27/4/21	
13.	Digital Modulation	28/4/21	Online class
14.	Multiplexing: Frequency Division Multiplexing,	30/4/21	with Mis Teal
15.	Time Division Multiplexing,	1/5/21	
16.	Code Division Multiplexing	3/5/21	
15	1	1 17701	-

Data Link Layer Design Issues, Error Detection and

Elementary Data Link Protocols,

17.

18.

Correction,

4/5/21

5/5/21



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Section : A	e : Computer Networks Date : 4-11-2021	Page No:1 o	f4
	0:00 Prepared By: P.Bhagya Lakshmi	Approved B	
Tools: MS			N.
No. of Periods	TOPIC	Date	Mode of Delivery
	troduction erstand OSI and TCP/IP models baum and David J Wetherall, Computer Networks, 5th	h Edition, Pear	son Edu, 2010
	I Later Andrew	7/4/21	
1.	Introduction	1/4/21	
2.	Network Topologies	7/4/21	
2.	Total Topologias	8/4/21	
3.	LAN	9/4/21	
4.	MAN	10/4/21	
4.	1711 217	10, 1121	
5.	WAN	12/4/21	Online class with MS Teams
6.	OSI Reference Model	13/4/21 to	William Touris
		15/4/21	
7.	TCP/IP Model	16/4/21to	
		17/4/21	
8.	Comparison between OSI and TCP/IP	19/4/21	
9.	Tutorial Class	20/4/21	
CO 2: Und TB: Tanen	Physical Layer erstand about the physical layer in OSI reference mod baum and David J Wetherall, Computer Networks, 5t	h Edition, Pear	son Edu, 2010
10.	Physical Layer – Fourier Analysis: – Bandwidth Limited Signals	22/4/21	
11.	The Maximum Data Rate of Channel	23/4/21to	
		24/4/21	
	Guided Transmission Media,	26/4/21 to	1
12.	Control 11 minutes and 1 minut	27/1/21	
		27/4/21 28/4/21	Online class
13.	Digital Modulation		
13. 14.	Digital Modulation  Multiplexing: Frequency Division Multiplexing,	28/4/21	
13.	Digital Modulation	28/4/21 30/4/21	Online class with MS Teams



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	Correction,	
18.	Elementary Data Link Protocols,	5/5/21
19.	Sliding Window Protocols	6/5/21
20.	Tutorial Class	7/5/21

#### UNIT-III DATALINK LAYER

CO 3: Understand about the data link layer in OSI reference model

TB: Computer Networks: A Top Down Approach, Behrouz A. Forouzan, FirouzMosharraf, McGraw Hill Education

21.	The Data Link Layer - ServicesProvided to the	8/5/21	
	Network Layer		
22.	Framing	10/5/21	
23.	Error Control – Flow Control,	11/5/21to12 /5/21	
24.	Error Detection and Correction	13/5/21	
25.	Error-Correcting Codes	14/5/21to16 /5/21	
26.	Error Detecting Codes,	17/5/21	Online class with MS Teams
27.	Elementary Data Link Protocols- A Utopian Simplex Protocol-	18/5/21	
28.	A Simplex Stop and Wait Protocol for an Error free channel-	19/5/21	
29.	A Simplex Stop and Wait Protocol for a Noisy Channel,	20/5/21	
30.	Sliding Window Protocols-AOne Bit Sliding Window Protocol-	21/5/21	
31.	A Protocol Using Go-Back-N-	22/5/21to24 /5/21	
32.	A Protocol Using Selective Repeat	26/5/21	
33.	Tutorial class	27/5/21	

#### UNIT - IV The Medium Access Control Sublayer

CO 4: Analyze MAC layer protocols and LAN technologies

TB: Computer Networks: A Top Down Approach, Behrouz A. Forouzan, FirouzMosharraf, McGraw Hill Education

No. of Periods	TOPIC	DATE	Mode of Delivery
34.	The Medium Access Control Sublayer-The Channel Allocation Problem	28/5/21	Online class with MS Teams
35.	Static Channel Allocation-Assumptions for Dynamic Channel Allocation,	29/5/21	
36.	Multiple Access Protocols-Aloha-	31/5/21	
37.	Carrier Sense Multiple AccessProtocols-	1/6/21	
38.	Collision-Free Protocols	2/6/21	
39.	Limited Contention Protocols-	3/6/21	



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40.	Wireless LAN Protocols,	4/6/21
41.	Ethernet-Classic Ethernet PhysicalLayer-Classic Ethernet	5/6/21
42.	MAC Sublayer Protocol-EthernetPerformance-Fast Ethernet	7/6/21
43.	Gigabit Ethernet-10-Gigabit Ethernet- Retrospective on Ethernet	8/6/21to 9/6/21
44.	Wireless Lans-The 802.11Architecture	10/6/21to 11/6/21
45.	Protocol Stack-The 802.11 Physical Layer	12/6/21
46.	The802.11 MAC Sublayer Protocol	14/6/21to 15/6/21
47.	The 805.11 Frame Structure-Services	16/6/21
48.	Tutorial class	17/6/21

**UNIT -V Network Layer** 

CO 5: Understand routing and congestion control algorithms

TB: Tanenbaum and David J Wetherall, Computer Networks, 5th Edition, Pearson Edu, 2010

49.	Design Issues-The Network LayerDesign Issues -	18/6/21to2 1/6/21	
	G. 15 15 1 G 21		
50.	Store and Forward Packet Switching-	22/6/21	
51.	Services Provided to the Transport Layer	23/6/21	Outing along
52.	Implementation of Connectionless Service-	24/6/21	Online class with MS Teams
53.	Implementation of Connection Oriented Service-	25/6/21	
54.	Comparison of Virtual Circuit and Datagram Networks,	26/6/21	
55.	Routing Algorithms-The Optimality principle	28/6/21	
56.	Shortest path Algorithm,	29/6/21	
57.	Congestion Control Algorithms	30/6/21	
58.	Approaches to Congestion Control-Traffic	1/7/21	
59.	Aware Routing-Admission	2/7/21	
60.	Control-TrafficThrottling-Load Shedding.	3/7/21	
61.	Tutorial Class	5/7/21	

UNIT -VI Transport Layer and Application Layer

CO 6: Understand how internet works.

TB: Tanenbaum and David J Wetherall, Computer Networks, 5th Edition, Pearson Edu, 2010

2.	Transport Layer – The Internet Transport Protocols: Udp,	6/7/21
	The Internet Transport Protocols:Tcp	7/7/21 to
		12/7/21
4.	Application Layer - The Domain Name System:	13/7/21
55.	The DNS Name Space, ResourceRecords,	14/7/21



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66.	Name Servers,	15/7/21	
67.	Electronic Mail: Architecture and Services,	16/7/21	Online class with MS Teams
68.	The User Agent, Message Formats,	17/7/21 to 22/7/21	with MS Teams
69.	Message Transfer,	23/7/21	
70.	Final Delivery	24/7/21	
71.	Tutorial Class	26/7/21	

P-Bhagya Lakshmi Signature of the Faculty 5/6/21 Signature of the HOD

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#### TENTATIVE LESSON PLAN

Course Title DATA WAREHOUSING AND MINING(R1632052)			
Year /Sem : III/II	Date: 12/4/21	AY:2020-21	
Section: Sec A			
Revision No:	Prepared By :Dr.N Neelima Priyanka Associate Prof	Approved By: HOD	

Tools: Black Board, PPT, Video Lectures

#### **UNIT-I Introduction**

CO1:Understand stages in building a Data Warehouse.

#### TEXT BOOK:

- 1. Introduction to Data Mining: Pang-Ning Tan & Michael Steinbach, Vipin Kumar, Pearson.
- 2. Data Mining concepts and Techniques, 3/e, Jiawei Han, Michel Kamber, Elsevier

No.of Periods	Topic	Date	Mode of delivry
1	Introduction		
2	Why Data Mining? What Is Data Mining?		
3	What Kinds of Data Can Be Mined?		
4	What Kinds of Patterns Can Be Mined?		
5	Which Technologies Are Used?	From: 12/4/2021	
6	Major Issues in Data Mining.		
7	Data Objects and Attribute Types		Lecture with
8	Basic Statistical Descriptions of Data	To:	discussions
9	Visualization of		
10	Data Visualization	27/4/2021	
11	Visualization methods		
12	Measuring Data Similarity and dissimilarity		
13	Measuring Data Similarity and		
14	Tutorial		

#### **UNIT-II:Data Pre-processing**

CO2:Gain knowledge about data preprocessing, and proximity measures on different data sets. TEXT BOOK:

- 1. Introduction to Data Mining: Pang-Ning Tan & Michael Steinbach, Vipin Kumar, Pearson.
- 2. Data Mining concepts and Techniques, 3/e, Jiawei Han, Michel Kamber, Elsevier

15	Data Preprocessing		
16	Data Cleaning		
17	Data Integration		
18	Data Reduction		
19	WaveletTransformation	From: 28/4/2021	Lecture with
20	PCA		Bottaro With



43

Problem Defecation,

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21	Data Transformation	To: 12/5/2021	discussions
22	Smoothing, Normalization ect		
23	Data Discretization	7	
24	Tutorial		
	-III: Classification		
CO3:0	Gain knowledge about basic concepts of classification	on and Decision Tree algorithm	m.
	BOOK:		
	roduction to Data Mining: Pang-Ning Tan & Michael		earson.
2. Da	ta Mining concepts and Techniques, 3/e, Jiawei Han	, Michel Kamber, Elsevier	
25	Introduction to Classification		
26	Basic concepts		
27	General approach to solving a classification		
28	Decision tree induction	From: 13/5/2021	
29	Working of decision tree		
30	Building a decision tree	To: 25/5/2021	Lecture with
31	Decision tree algorithm	1	discussions
32	Methods for expressing an attribute test		
	conditions	1	
33	Measures for selecting the best split	_	
34	Algorithm for decision tree induction		
35	Tutorial	1	
	-IV: ClassificationAlterative Techniques		
	Gain knowledge about basic concepts of classification	on and Decision Tree algorith	m
	BOOK:	-1 Cariolanda Vinia Vanna Da	
	roduction to Data Mining: Pang-Ning Tan & Michae ta Mining concepts and Techniques, 3/e, Jiawei Han		earson.
		, Wicher Kamber, Eisevier	
36	Classification: Alterative Techniques		
37	Bayes' Theorem,		Lecture with
38	Naïve Bayesian Classification,	From: 26/5/2021	discussions
40	Bayesian Belief Networks	To: 5/6/2021	discussions
41	Tutorial	1	
UNIT	-V: Association Analysis: Basic Concepts and Al	porithms	
	Analyze and evaluate performance of algorithms for		
TEXT	BOOK:		
ILAI	book.		
	roduction to Data Mining: Pang-Ning Tan & Michael		earson.
	ta Mining concepts and Techniques, 3/e, Jiawei Han	, Michel Kamber, Elsevier .	
42	Association Basic concepts		

Lecture with



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44	Frequent item set generation		discussions
45	Rule generation	From: 7/6/2021	
46	Compact representation of frequent item sets		
47	Closed Item set	To: 16/6/2021	
48	FP-growth algorithm		
49	Apriori example		
50	Rule generation example		
51	FP Growth Example		
52	Analysis of FP Growth		
53	Tutorial		

#### UNIT-VI: Cluster Analysis: Basic Concepts and Algorithms

CO6:Be able to understand Clustering techniques like K-Means, bisecting K-Means and additional issues of K-Means. Become familiar with Hierarchical clustering and density based clustering TEXT BOOK:

- 1. Introduction to Data Mining: Pang-Ning Tan & Michael Steinbach, Vipin Kumar, Pearson.
- 2. Data Mining concepts and Techniques, 3/e, Jiawei Han, Michel Kamber, Elsevier

54	Basic concepts, cluster analysis		
55	Different types of clustering		
56	Different types of clusters		
57	K-means, The basic K-means algorithm		
58	The Basic K-Means Algorithm		Lecture with
59	K-means: Additional issues, Bisection k-means		discussions
60	k-means and different types of clusters strengths and weaknesses	From: 17/6/2021	
61	K-means as an optimization problem	To: 1/7/2021	
62	Hierarchical clustering		
63	Agglomerative hierarchical clustering algorithm, specific techniques		
65	DBSCAN, Traditional Density: Center-based		
66	Tutorial		

Faculty/ Date

SRK Institute of Technology ENIKEPADU, VIJAYAWADA-521 108 **HOD/Date** 



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Department of Computer Science and Engineering

#### TENTATIVE LESSON PLAN

Course Title DATA WAREHOUSING AND MINING(R1632052)			
Year /Sem : III/II Section : Sec B	Date: 12/4/21	AY:2020-21	
Revision No:	Prepared By :Dr.N Neelima Priyanka Associate Prof	Approved By: HOD	

Tools: Black Board, PPT, Video Lectures

#### **UNIT-I Introduction**

CO1:Understand stages in building a Data Warehouse.

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No.of Periods	Торіс	Date	Mode of delivry
1	Introduction		
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3	What Kinds of Data Can Be Mined?		
4	What Kinds of Patterns Can Be Mined?		
5	Which Technologies Are Used?	From: 12/4/2021	
6	Major Issues in Data Mining.		Lecture with
7	Data Objects and Attribute Types		discussions
8	Basic Statistical Descriptions of Data	To:	discussions
9	Visualization of		
10	Data Visualization	27/4/2021	
11	Visualization methods		
12	Measuring Data Similarity and dissimilarity		
13	Measuring Data Similarity and		
14	Tutorial		

#### **UNIT-II:Data Pre-processing**

CO2:Gain knowledge about data preprocessing, and proximity measures on different data sets. TEXT BOOK:

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- 2. Data Mining concepts and Techniques, 3/e, Jiawei Han, Michel Kamber, Elsevier

15	Data Preprocessing		
16	Data Cleaning		
17	Data Integration	From: 28/4/2021	Lecture with
18	Data Reduction		
19	WaveletTransformation		
20	PCA		



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21	Data Transformation	To: 12/5/2021	discussions
22	Smoothing, Normalization ect		
23	Data Discretization		
24	Tutorial		
	-III: Classification		
	Gain knowledge about basic concepts of classification	and Decision Tree algorithm	1.
	BOOK:		
	roduction to Data Mining: Pang-Ning Tan & Michael ta Mining concepts and Techniques, 3/e, Jiawei Han,		arson.
25	Introduction to Classification		
26	Basic concepts		
27	General approach to solving a classification	From: 13/5/2021 To: 25/5/2021	
28	Decision tree induction		
29	Working of decision tree		
30	Building a decision tree		Lecture with
31	Decision tree algorithm		discussions
32	Methods for expressing an attribute test		
33	conditions  Measures for selecting the best split		
34	Algorithm for decision tree induction		
35	Tutorial		
	-IV: ClassificationAlterative Techniques		
	Gain knowledge about basic concepts of classification	n and Decision Tree algorithm	n
	BOOK:	unu 2 consisii 1 co ungo iun	
1. Inti	roduction to Data Mining: Pang-Ning Tan & Michael	Steinbach, Vipin Kumar, Pe	arson.
2. Dat	ta Mining concepts and Techniques, 3/e, Jiawei Han,	Michel Kamber, Elsevier	
36	Classification: Alterative Techniques		
37	Bayes' Theorem,		
38	Naïve Bayesian Classification,	From: 26/5/2021	Lecture with discussions
40	Bayesian Belief Networks	To: 5/6/2021	discussions
41	Tutorial		
	-V: Association Analysis: Basic Concepts and Alg		

1. Introduction to Data Mining: Pang-Ning Tan & Michael Steinbach, Vipin Kumar, Pearson.

2. Data Mining concepts and Techniques, 3/e, Jiawei Han, Michel Kamber, Elsevier .

Association Basic concepts

Problem Defecation,

42

43

Lecture with



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(ISO 9001:2015 Certified Institution)
Department of Computer Science and Engineering

44	Frequent item set generation	From: 7/6/2021 To: 16/6/2021	discussions
45	Rule generation		
46	Compact representation of frequent item sets		
47	Closed Item set		
48	FP-growth algorithm		
49	Apriori example		
50	Rule generation example		
51	FP Growth Example		
52	Analysis of FP Growth		
53	Tutorial		

#### **UNIT-VI: Cluster Analysis: Basic Concepts and Algorithms**

CO6:Be able to understand Clustering techniques like K-Means, bisecting K-Means and additional issues of K-Means. Become familiar with Hierarchical clustering and density based clustering TEXT BOOK:

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- 2. Data Mining concepts and Techniques, 3/e, Jiawei Han, Michel Kamber, Elsevier

54	Basic concepts, cluster analysis		
55	Different types of clustering		
56	Different types of clusters		
57	K-means, The basic K-means algorithm		
58	The Basic K-Means Algorithm		Lecture with
59	K-means: Additional issues, Bisection k-means	From: 17/6/2021	discussions
60	k-means and different types of clusters strengths and weaknesses		
61	K-means as an optimization problem	To: 1/7/2021	
62	Hierarchical clustering		
63	Agglomerative hierarchical clustering algorithm, specific techniques		
65	DBSCAN, Traditional Density: Center-based		
66	Tutorial		

Faculty/ Date

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# TENTATIVE LESSION PLAN: R1632053 DESIGN AND ANALYSIS OF ALGORITHMS

Course Title: DESIGN AND ANALYSIS OF ALGORITHMS			
Section: Sec A	Date: 1/4/2021	Page No : 01 of 04	
Revision No: 00	Prepared By : D.MADHAVI	Approved By : HOD	

Tools: MS Teams, PPTs

No. of	TORIC	Date	Mode of
periods	TOPIC	Date	Delivery

#### **UNIT-I: INTRODUCTION**

CO1: Argue the correctness of algorithms using inductive proofs and invariants. CO2: Analyze worst-case running times of algorithms using asymptotic analysis.

TB: "Fundamentals of computer algorithms" E. Horowitz S. Sahni, University Press

Vhat is an Algorithm		
Algorithm Specification		
seudocode Conventions		Lambon convergence
Recursive Algorithm	F	name and a second
Performance Analysis		Online Class
Space Complexity	12/4/2021	Online Class with Microsoft's Teams
ime Complexity	To:	
Amortized Complexity	27/4/2021	
Asymptotic Notation		
Practical Complexities		
Performance Measurement		
Tutorial		
	Algorithm Specification Seudocode Conventions Secursive Algorithm Serformance Analysis Space Complexity Sime Complexity Amortized Complexity Asymptotic Notation Serformance Measurement	Algorithm Specification Seudocode Conventions Recursive Algorithm From: Performance Analysis Space Complexity Time Complexity To: Amortized Complexity Asymptotic Notation Practical Complexities Performance Measurement

# UNIT-II: DIVIDE AND CONQUER

CO3: Describe the divide-and-conquer paradigm and explain when an algorithmic design situation calls for it. Recite algorithms that employ this paradigm. Synthesize divide-and-conquer algorithms. Derive and solve recurrences describing the performance of divide- and-conquer algorithms.

TB: "Fundamentals of computer algorithms" E. Horowitz S. Sahni, University Press



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Department of Computer Science and Engineering

No. of periods	TOPIC	Date	Mode of Delivery
13	Dived and Conquer: General Method		
14	Defective Chessboard	From: 28/4/2021  To: 12/5/2021	
15	Binary Search		Online classes with Microsoft's Teams
16	Finding the Maximum and Minimum		
17	Merge Sort		
18	Quick Sort		
19	Performance Measurement		
20	Randomized Sorting Algorithms		
21	Tutorial		

# UNIT - III: GREEDY METHOD

CO5: Describe the greedy paradigm and explain when an algorithmic design situation calls for it. Recite algorithms that employ this paradigm. Synthesize greedy algorithms, and analyze them.

TB: "Fundamentals of computer algorithms" E. Horowitz S. Sahni, University Press

22	The Greedy Method: The General Method		
23	Knapsack Problem		
24	Job Sequencing with Deadlines	From:	
25	Minimum-cost Spanning Trees	13/5/2021	Online classes
26	Prim's Algorithm,	13/3/2021	with Microsoft's
27	Kruskal's Algorithms	To:	Teams
28	An Optimal Randomized Algorithm	25/5/2021	
29	Optimal Merge Patterns		
30	Single Source Shortest Paths.		
31	Tutorial	Pictoria	

# UNIT - IV: DYNAMIC PROGRAMMING

CO2: Describe the dynamic-programming paradigm and explain when an



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Department of Computer Science and Engineering

No. of periods	TOPIC	Date	Mode of Delivery
0	c design situation calls for it. Recite algorithms th		paradigm.
Synthesize	dynamic- programming algorithms, and analyze	them.	
TB: "Fun	damentals of computer algorithms" E. Horowitz S	. Sahni, Univer	sity Press
32	Dynamic Programming Introduction		
33	All - Pairs Shortest Paths,	From:	Online classes
34	Single - Source Shortest paths General Weights,	26/5/2021	
35	String Edition		with Microsoft's
36	0/1 Knapsack	To:	Teams
37	Reliability Design,	5/6/2021	
38	Tutorial		
TIMET W	DACUTDACKING		

#### UNIT - V BACKTRACKING

CO4: Describe the dynamic-programming paradigm and explain when an algorithmic design situation calls for it. Recite algorithms that employ this paradigm. Synthesize dynamic-programming algorithms, and analyze them.

TB: "Fundamentals of computer algorithms" E. Horowitz S. Sahni, University Press

39	Backtracking: The General Method		
40	The 8-Queens Problem	From:	0.1
41	Sum of Subsets	7/6/2021	Online classes with Microsoft's
42	Graph Coloring		Teams
43	Hamiltonian Cycles	To: 16/6/2021	
44	Tutorial	10/0/2021	

## UNIT - VI: BRANCH AND BOUND

CO4: Describe the dynamic-programming paradigm and explain when an algorithmic design situation calls for it. Recite algorithms that employ this paradigm. Synthesize dynamic-programming algorithms, and analyze them.

TB: "Fundamentals of computer algorithms" E. Horowitz S. Sahni, University Press



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Department of Computer Science and Engineering

No. of periods	ТОРІС	Date	Mode of Delivery
45	Branch and Bound: The Method		
46	Least cost (LC) Search		
47	The 15-Puzzle: an Example		
48	Control Abstraction for LC-Search	From:	
49	Bounding, FIFO Branch-and-Bound	17/6/2021	
50	LC Branch and Bound		Online classes
51	0/1 Knapsack Problem	То:	with Microsoft's
52	LC Branch-and Bound Solution	1/7/2021	
53	FIFO Branch-and-Bound Solution		
54	Traveling Salesperson		
55	Tutorial		

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PRINCIPAL

Signature of HOD6 4 21

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Department of Computer Science and Engineering

Date

Delivery

# **TENTATIVE LESSION PLAN: R1632053 DESIGN AND ANALYSIS OF ALGORITHMS**

Section: Sec B	Date: 1/4/2021	Page No : 01 of 04	
Revision No: 00	Prepared By : D.MADHAVI	Approved By : HOD	
Tools : MS Teams,	PPTs		
No. of			Mode of

# **UNIT-I: INTRODUCTION**

No. of

periods

CO1: Argue the correctness of algorithms using inductive proofs and invariants. CO2: Analyze worst-case running times of algorithms using asymptotic analysis.

TOPIC

TB: "Fundamentals of computer algorithms" E. Horowitz S. Sahni, University Press 1 What is an Algorithm

Algorithm Specification		Online Class with Microsoft's Teams
Pseudocode Conventions		
Recursive Algorithm	Frame	
Performance Analysis		
Space Complexity	12/4/2021	
Time Complexity	To:	
Amortized Complexity	27/4/2021	
Asymptotic Notation		
Practical Complexities		
Performance Measurement		
Tutorial		
	Pseudocode Conventions  Recursive Algorithm  Performance Analysis  Space Complexity  Time Complexity  Amortized Complexity  Asymptotic Notation  Practical Complexities  Performance Measurement	Pseudocode Conventions  Recursive Algorithm  Performance Analysis  Space Complexity  Time Complexity  To: Amortized Complexity  Asymptotic Notation  Practical Complexities  Performance Measurement

#### UNIT-II: DIVIDE AND CONQUER

CO3: Describe the divide-and-conquer paradigm and explain when an algorithmic design situation calls for it. Recite algorithms that employ this paradigm. Synthesize divide-and- conquer algorithms. Derive and solve recurrences describing the performance of divide- and-conquer algorithms.



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No. of periods	TOPIC	Date	Mode of Delivery
TB: "Fund	amentals of computer algorithms" E. Horow	itz S. Sahni, Univer	sity Press
13	Dived and Conquer: General Method		
14	Defective Chessboard	From:	
15	Binary Search	28/4/2021	Online classes with Microsoft's Teams
16	Finding the Maximum and Minimum		
17	Merge Sort	To: 12/5/2021	
18	Quick Sort	12/3/2021	
19	Performance Measurement		
20	Randomized Sorting Algorithms		
21	Tutorial		

#### UNIT-III: GREEDY METHOD

CO5: Describe the greedy paradigm and explain when an algorithmic design situation calls for it. Recite algorithms that employ this paradigm. Synthesize greedy algorithms, and analyze them.

TB: "Fundamentals of computer algorithms" E. Horowitz S. Sahni, University Press

22	The Greedy Method: The General Method		
23	Knapsack Problem		
24	Job Sequencing with Deadlines	F	
25	Minimum-cost Spanning Trees	From:	0."
26	Prim's Algorithm,	13/3/2021	Online classes with Microsoft's
27	Kruskal's Algorithms	To:	Teams
28	An Optimal Randomized Algorithm	25/5/2021	
29	Optimal Merge Patterns		
30	Single Source Shortest Paths.		
31	Tutorial		

UNIT - IV: DYNAMIC PROGRAMMING



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Department of Computer Science and Engineering

No. of periods	TOPIC	Date	Mode of Delivery
CO2: Describ	the dynamic-programming paradign	n and explain	when an

CO2: Describe the dynamic-programming paradigm and explain when an algorithmic design situation calls for it. Recite algorithms that employ this paradigm. Synthesize dynamic-programming algorithms, and analyze them.

TB: "Fundamentals of computer algorithms" E. Horowitz S. Sahni, University Press

32	Dynamic Programming Introduction		
33	All - Pairs Shortest Paths,	From: 26/5/2021	Online classes
34	Single - Source Shortest paths General Weights,		
35	String Edition		with Microsoft's
36	0/1 Knapsack	То:	Teams
37	Reliability Design,	5/6/2021	
38	Tutorial		

#### UNIT - V BACKTRACKING

CO4: Describe the dynamic-programming paradigm and explain when an algorithmic design situation calls for it. Recite algorithms that employ this paradigm. Synthesize dynamic-programming algorithms, and analyze them.

TB: "Fundamentals of computer algorithms" E. Horowitz S. Sahni, University Press

39	Backtracking: The General Method		
40	The 8-Queens Problem	From:	Online classes with Microsoft's
41	Sum of Subsets	7/6/2021	
42	Graph Coloring		Teams
43	Hamiltonian Cycles	To: 16/6/2021	
44	Tutorial	10/0/2021	

#### UNIT - VI: BRANCH AND BOUND

CO4: Describe the dynamic-programming paradigm and explain when an algorithmic design situation calls for it. Recite algorithms that employ this paradigm. Synthesize dynamic-programming algorithms, and analyze them.



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ТОРІС	Date	Mode of Delivery
lamentals of computer algorithms" E. Horov	vitz S. Sahni, Univer	sity Press
Branch and Bound: The Method		
Least cost (LC) Search		
The 15-Puzzle: an Example		
Control Abstraction for LC-Search	From:	
Bounding, FIFO Branch-and-Bound	17/6/2021	
LC Branch and Bound		Online classes
0/1 Knapsack Problem	То:	with Microsoft's Teams
LC Branch-and Bound Solution	1/7/2021	
FIFO Branch-and-Bound Solution		
Traveling Salesperson		
Tutorial		
	lamentals of computer algorithms" E. Horov Branch and Bound: The Method  Least cost (LC) Search  The 15-Puzzle: an Example  Control Abstraction for LC-Search  Bounding, FIFO Branch-and-Bound  LC Branch and Bound  0/1 Knapsack Problem  LC Branch-and Bound Solution  FIFO Branch-and-Bound Solution  Traveling Salesperson	lamentals of computer algorithms" E. Horowitz S. Sahni, University Branch and Bound: The Method  Least cost (LC) Search  The 15-Puzzle: an Example  Control Abstraction for LC-Search  Bounding, FIFO Branch-and-Bound  17/6/2021  LC Branch and Bound  0/1 Knapsack Problem  To:  LC Branch-and Bound Solution  Traveling Salesperson

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Signature of HOD 6 4 2 .

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Department of Computer Science and Engineering

#### TENTATIVE LESSON PLAN: R1632054 SOFTWARE TESTING METHODOLOGIES

Course Title: SOFTWARE TESTING METHODLOGIES (R1632054)

Section: Sec A & B Date: 06/04/2021 Page No: 01 of 05

Revision No: 00 Prepared By: CH.AMBEDKAR Approved By: HOD

Tools: Black board, Power Point Presentation

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-I:			
>	Introduction:		
>	Flow graphs and Path testing:		
CO 1:	Able to apply software testing knowledge	e and engineering	g methods
	and Have ability to know the Basics con	•	ting
	oftware Testing techniques – Boris Bez		
	ftware Testing Tools - Dr.K.V.K.K.Pra	sad, Dreamtech.	
1	UNIT-1: Introduction	06/4/2021	
2	Purpose of testing	07/4/2021	
3	Goals of testing	08/4/2021	
4	Phases in tester's mental life	09/4/2021	
5	Dichotomies	10/4/2021	Lecture
6	Model for testing	12/4/2021	interspersed
7	Consequences of bugs	13/4/2021	with
8	Taxonomy of bugs	15/4/2021	discussions Online Classes
9	Tutorial	16/4/2021	with MS Team
10	Basics concepts of path testing	17/4/2021	
11	Control Flow graphs	19/4/2021	
12	Path testing. Loops	20/4/2021	
13	Effectiveness of path testing	22/4/2021	
14	Predicates, path predicates and achievable paths.	23/4/2021	



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No. of Periods	торіс	Date	Mode of Delivery
17	Tutorial	27/4/2021	
16	Path instrumentation	26/4/2021	
15	Path sensitizing	24/4/2021	14 (Sept.)

#### UNIT-II:

- > Transaction Flow Testing:
- > Dataflow testing:
- **CO 2:** Able to know different testing techniques transaction, data flow, domain Testing strategies.
- TB: 1. Software Testing techniques Boris Bezier, Dreamtech
  - 2. Software Testing Tools Dr.K.V.K.K.Prasad, Dreamtech.

No. of Periods	TOPIC	Date	Mode of Delivery
24	Tutorial	04/5/2021	
23	Application of dataflow testing.	03/5/2021	discussions Online Classes with MS Teams
22	Strategies in dataflow testing	01/5/2021	
21	Data flow graphs	30/4/2021	
20	Basics of dataflow testing	29/4/2021	with
19	Transaction flow testing techniques	28/4/2021	Lecture interspersed
18	Transaction flows	27/4/2021	

#### UNIT-III:

- Domain Testing:
- > Paths, Path products and Regular expressions:
- CO 3: Able to solve testing problems by designing and selecting software test models, criteria, strategies and methods
- TB: 1. Software Testing techniques Boris Bezier, Dreamtech
  - 2. Software Testing Tools Dr.K.V.K.K.Prasad, Dreamtech.

25	Domain and Paths	05/5/2021	
26	Domain closure	06/5/2021	Lecture interspersed with discussions Online Classes
27	Nice and ugly domains	07/5/2021	
28	Domain testing	08/5/2021	
29	Domains and interfaces testing	10/5/2021	with MS Teams



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30	Domains and testability	11/5/2021	
31	Span Compatibility	12/5/2021	
32	Tutorial	13/5/2021	
33	Path Products & Path Sums	15/5/2021	
34	Path Expression	17/5/2021	Lecture
35	Node Reduction procedure	18/5/2021	interspersed
36	Applications: Maximum Path count Arithmetic	19/5/2021	with discussions
37	Lower path count Arithmetic	20/5/2021	Online Classes with MS Teams
38	Probability	21/5/2021	
39	Mean processing time of a routine	22/5/2021	
40	Push/pop, Get/Return	24/5/2021	
41	Tutorial	25/5/2021	

#### UNIT-IV:

- > Syntax Testing:
- > Logic Based Testing:
- CO 4: Have basic understanding and knowledge of contemporary issues in software testing, such as component based software testing problems.
- TB: 1. Software Testing techniques Boris Bezier, Dreamtech.
  - 2. Software Testing Tools Dr.K.V.K.K.Prasad, Dreamtech.

No. of Periods	TOPIC	Date	Mode of Delivery
41	Syntax Testing: Why, What and How	26/5/2021	
42	A Grammar for formats	27/5/2021	Lecture
43	Test Case Generation	28/5/2021	interspersed with discussions Online Classes with MS Teams
44	Implementation and Application	29/5/2021	
45	Overview	31/5/2021	
46	Decision tables	01/6/2021	



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Department of Computer Science and Engineering

17	Path expressions	02/6/2021
48	KV charts	03/6/2021
49	Tutorial	04/6/2021

#### UNIT-V:

- State, State Graphs and Transition Testing:
- > Graph Matrices and Application:
- CO 5: Able to understand and identify various software testing applications using graphs and graph matrices
- TB: 1. Software Testing techniques Boris Bezier, Dreamtech.

  2. Software Testing Tools Dr.K.V.K.K.Prasad, Dreamtech.

50	State graphs	05/6/2021	
51	Good & bad state graphs	07/6/2021	
52	State testing	08/6/2021	Lecture
53	Motivational overview	09/6/2021	interspersed
54	Matrix of graph	10/6/2021	with discussions Online Classes with MS Teams
55	Relations	11/6/2021	
56	Power of a matrix	12/6/2021	
57	Node reduction algorithm	14/6/2021	
58	Tutorial	16/6/2021	

#### UNIT-VI:

- Software Testing Tools:
- **CO 6:** Able to test the applications manually by applying different testing methods and automation tools.
- TB: 1. Software Testing techniques Boris Bezier, Dreamtech.
  - 2. Software Testing Tools Dr.K.V.K.K.Prasad, Dreamtech.

59	Software Testing Tools: Introduction to Testing.	17/6/2021	Lecture
60	Automated Testing, Concepts of Testing.	18/6/2021	interspersed with discussions Online Classes
61	Introduction to tools like Win runner,	19/6/2021	
62	Load Runner, Jmeter.	21/6/2021	
63	About Win Runner, About Win Runner	22/6/2021	with MS Teams
64	Mapping the GUI, Recording Test	24/6/2021	



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65	Working with Test, Checkpoints	25/6/2021	
66	Test Script Language	28/6/2021	
67	Running and Debugging Tests	01/7/2021	Online Classes
68	Putting it all together, Analyzing Results	02/7/2021	with MS Teams
69	Rapid Test Script Wizard	05/7/2021	
70	Tutorial	06/7/2021	

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Department of Computer Science and Engineering

#### TENTATIVE LESSON PLAN: R163205B INTERNET OF THINGS

Course Title: Inter	net of Things (R163205B)	
Section : Sec A	Date: 06/04/2021	Page No: 01 of 04
Revision No: 00	Prepared By : M Naresh Babu	Approved By : HOD

ILLAIDIOI	110.00 I repaired by . Ivi I tale com manda	Lippiored	,
Tools: B	Black board, PPTs, Moodle		
No. of Periods	TOPIC	Date	Mode of Delivery
Unit-1 7	he Internet of Things		
	emonstrate knowledge and understanding of the securi	ty and ethical	issues of the
	of Things		
	ternet of Things: Architecture, Design Principles And Appl	ications, Raika	mal. McGrav
	her Education	and the same of the same	, 1.100141
1	UNIT-1:	7/4/21	
	The Internet of Things: An Overview of Internet of things	7/4/21	
2	Internet of Things Technology Behind IoTs	8/4/51	
3,4	Sources of the IoTs	9/4/21	Lecture intersperse with
		10/4/21	
5,6,7	M2M Communication	12/4/21	
		13/4/21	
		14/4/21	discussions
8,9	Examples OF IoTs	15/4/21	
		16/4/21	
10	Design Principles For Connected Devices	16/4/21	

UNIT-II: Business Models for Business Processes in the Internet of Things

CO2: Conceptually identify vulnerabilities, including recent attacks, involving the Internet of Things

TB:" Internet of Things: Architecture, Design Principles And Applications, Rajkamal, McGraw Hill Higher Education"

12	UNIT-II: Business Models for Business Processes in the Internet of Things	20/4/21	Lecture
13,14	IoT/M2M systems LAYERS AND designs standardizations	22/4/21 23/4/21	interspersed with discussions
15,16	Modified OSI Stack for the IoT/M2M Systems	24/4/21 26/4/21	
17,18	ETSI M2M domains and High-level capabilities	27/4/21	



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Department of Computer Science and Engineering

No. of Periods	TOPIC	Date	Mode of Delivery
25	Tutorial	6/5/21	
		5/5/21	
23,24	Gateway Ease of designing and affordability	4/5/21	
		3/5/21	
21,22	Data Enrichment and Consolidation and Device Management	1/5/21	
		30/4/21	
19,20	Communication Technologies	29/4/21	
		28/4/21	

UNIT-III: Design Principles for the Web Connectivity for connected-Devices

CO3: Develop critical thinking skills

TB:" Internet of Things: Architecture, Design Principles And Applications, Rajkamal, McGraw Hill Higher Education"

26,27	UNIT-III: Design Principles for the Web Connectivity for connected- Devices	7/5/21 8/5/21	
28,29,	Web Communication protocols for Connected Devices	10/5/21	
30		11/5/21	Lecture
		12/5/21	interspersed
31,32	Message Communication protocols for Connected Devices	13/5/21	with
,33		14/5/21	discussions
		15/5/21	
34,35,	Web Connectivity for connected-Devices	17/5/21	
36		18/5/21	
		19/5/21	
37	Tutorial	20/5/21	

**UNIT-IV: Internet Connectivity Principles** 

CO4: Compare and contrast the threat environment based on industry and/or device type TB:" Internet of Things: Architecture, Design Principles And Applications, Rajkamal, McGraw Hill Higher Education"

No. of Periods	TOPIC	Date	Mode of Delivery
38	UNIT-IV Internet Connectivity Principles	21/5/21	
39,40, 41	Internet connectivity	22/5/21 24/5/21 25/5/21	Lecture interspersed with
42	Application Layer Protocols: HTTP	26/5/21	discussions
43	HTTPS	27/5/21	



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Department of Computer Science and Engineering

44	FTP	28/5/21
45	Telnet	29/5/21
46	Tutorial	31/5/21

UNIT-V: Data Acquiring Organizing and Analytics in IoT/M2M Applications/Services/Business Processes

CO5: Gain knowledge on understanding Communication Protocols

TB:" Internet of Things: Architecture, Design Principles And Applications, Rajkamal, McGraw Hill Higher Education"

47	<u>UNIT-V</u>	1/6/21	
	Data Acquiring		
48,49	Organizing and Analytics in IoT/M2M	2/6/21 3/6/21	
50,51	Applications/Services/Business Processes	4/6/21 5/6/21	
52,53	IOT/M2M Data Acquiring and Storage	7/6/21 8/6/21	
54,55	Business Models for Business Processes in the Internet Of Things	9/6/21 10/6/21	Lecture interspersed
56,57 ,58	Organizing Data	11/6/21 12/6/21 14/6/21	with discussions
59,60, 61	Transactions	15/6/21 16/6/21 17/6/21	
62,63	Business Processes	18/6/21 19/6/21	
64,65	Integration and Enterprise Systems.	21/6/21 22/6/21	
66	Tutorial	23/6/21	

UNIT-VI: Data Collection Storage and Computing Using a Cloud Platform for IoT/M2M Applications/Services

CO5: Gain Knowledge about the internet of things using cloud infrastructure

TB:" Internet of Things: Architecture, Design Principles And Applications, Rajkamal, McGraw Hill Higher Education"

67	UNIT-VI	24/6/21
	Data Collection	
68	Storage and Computing Using a Cloud Platform for IoT/M2M Applications/Services	25/6/21
69	Data Collection	28/6/21



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Department of Computer Science and Engineering

70	Storage and Computing Using cloud platform Everything as a service and Cloud Service Models	30/6/21	
71	IOT cloud-based services using the Xively (Pachube/COSM)	1/7/21	
		2/7/21	
72	Nimbits and other platforms Sensor	3/7/21	
		5/7/21	
73	Participatory Sensing	6/7/21	
	1 , 0	7/7/21	
74	Actuator	8/7/21	Lecture interspersed with
75	Radio Frequency Identification and Wireless	9/7/21	
76	Sensor Network Technology	12/7/21	
77	Sensors Technology	13/7/21	discussions
	2	14/7/21	
78	Sensing the World	15/7/21	
79	Tutorial	17/7/21	

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## **TENTATIVE LESSON PLAN: R163205B** INTERNET OF THINGS

Course Title: Inter	net of Things (R163205B)		
Section : Sec B	Date: 06/04/2021	Page No: 01 of 04	
Revision No: 00	Prepared By : M Naresh Babu	Approved By : HOD	

No. of Periods	TOPIC	Date	Mode of Delivery	
Unit-1 T	he Internet of Things			
CO1: D	emonstrate knowledge and understanding of the securi	ty and ethical	issues of the	
Internet	of Things			
TB:" In	ternet of Things: Architecture, Design Principles And Appl	lications, Rajka	mal, McGraw	
Hill Hig	her Education			
1	UNIT-1:	7/4/21		
	The Internet of Things: An Overview of Internet of things	11-1121		
2	Internet of Things Technology Behind IoTs	8/4/51		
3,4	Sources of the IoTs	9/4/21	Lastura	
		10/4/21	Lecture	
5,6,7	M2M Communication	12/4/21	interspersed	
,,,		13/4/21	with	
		14/4/21	discussions	
8,9	Examples OF IoTs	15/4/21		
,		16/4/21		
10	Design Principles For Connected Devices	17/4/21	7500000	

UNIT-II: Business Models for Business Processes in the Internet of Things

CO2: Conceptually identify vulnerabilities, including recent attacks, involving the Internet of Things

TB:" Internet of Things: Architecture, Design Principles And Applications, Rajkamal, McGraw Hill Higher Education"

12	UNIT-II: Business Models for Business Processes in the Internet of Things	20/4/21	Lecture
13,14	IoT/M2M systems LAYERS AND designs standardizations	22/4/21 23/4/21	interspersed with discussions
15,16	Modified OSI Stack for the IoT/M2M Systems	24/4/21 26/4/21	
17,18	ETSI M2M domains and High-level capabilities	27/4/21	



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Department of Computer Science and Engineering

No. of Periods	TOPIC	Date	Mode of Delivery
25	Tutorial	6/5/21	
		5/5/21	
23,24	Gateway Ease of designing and affordability	4/5/21	
		3/5/21	
21,22	Data Enrichment and Consolidation and Device Management	1/5/21	
		30/4/21	
19,20	Communication Technologies	29/4/21	
		28/4/21	

UNIT-III: Design Principles for the Web Connectivity for connected-Devices

CO3: Develop critical thinking skills

TB:" Internet of Things: Architecture, Design Principles And Applications, Rajkamal, McGraw

Hill Higher Education"

26,27	UNIT-III: Design Principles for the Web Connectivity for connected- Devices	7/5/21 8/5/21	
28,29, 30	Web Communication protocols for Connected Devices	10/5/21 11/5/21 12/5/21	Lecture interspersed
31,32 ,33	Message Communication protocols for Connected Devices	13/5/21 14/5/21 15/5/21	with discussions
34,35, 36	Web Connectivity for connected-Devices	17/5/21 18/5/21 19/5/21	
37	Tutorial	20/5/21	

**UNIT-IV: Internet Connectivity Principles** 

CO4: Compare and contrast the threat environment based on industry and/or device type TB:" Internet of Things: Architecture, Design Principles And Applications, Rajkamal, McGraw Hill Higher Education"

No. of Periods	TOPIC	Date	Mode of Delivery
38	UNIT-IV Internet Connectivity Principles	21/5/21	
39,40, 41	Internet connectivity	22/5/21 24/5/21 25/5/21	Lecture interspersed with
42	Application Layer Protocols: HTTP	26/5/21	discussions
43	HTTPS	27/5/21	



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Department of Computer Science and Engineering

44	FTP	28/5/21
45	Telnet	29/5/21
46	Tutorial	31/5/21

UNIT-V: Data Acquiring Organizing and Analytics in IoT/M2M Applications/Services/Business Processes

CO5: Gain knowledge on understanding Communication Protocols

TB:" Internet of Things: Architecture, Design Principles And Applications, Rajkamal, McGraw Hill Higher Education"

47	<u>UNIT-V</u>	1/6/21	
	Data Acquiring		
48,49	Organizing and Analytics in IoT/M2M	2/6/21 3/6/21	
50,51	Applications/Services/Business Processes	4/6/21 5/6/21	
52,53	IOT/M2M Data Acquiring and Storage	7/6/21 8/6/21	
54,55	Business Models for Business Processes in the Internet Of Things	9/6/21 10/6/21	Lecture intersperse
56,57 ,58	Organizing Data	11/6/21 12/6/21 14/6/21	with discussion
59,60, 61	Transactions	15/6/21 16/6/21 17/6/21	
62,63	Business Processes	18/6/21 19/6/21	
64,65	Integration and Enterprise Systems.	21/6/21 22/6/21	
66	Tutorial	23/6/21	

UNIT-VI: Data Collection Storage and Computing Using a Cloud Platform for IoT/M2M Applications/Services

CO5: Gain Knowledge about the internet of things using cloud infrastructure

TB:" Internet of Things: Architecture, Design Principles And Applications, Rajkamal, McGraw Hill Higher Education"

67	UNIT-VI Data Collection	24/6/21
68	Storage and Computing Using a Cloud Platform for IoT/M2M Applications/Services	25/6/21
59	Data Collection	28/6/21



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Department of Computer Science and Engineering

70	Storage and Computing Using cloud platform Everything as a service and Cloud Service Models	30/6/21	
71	IOT cloud-based services using the Xively (Pachube/COSM)	1/7/21	
		2/7/21	
72	Nimbits and other platforms Sensor	3/7/21	
		5/7/21	
73	Participatory Sensing	6/7/21	
		7/7/21	
74	Actuator	8/7/21	Lecture
75	Radio Frequency Identification and Wireless	9/7/21	interspersed
76	Sensor Network Technology	12/7/21	with
77	Sensors Technology	13/7/21	discussions
		14/7/21	
78	Sensing the World	15/7/21	
79	Tutorial	17/7/21	

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#### **TENTATIVE LESSON PLAN: R1642051**

Course Title: DIS	STRIBUTED SYSTEM	
Section : CSE- A & B	Date: 06-04-2021	A.Y:2020-21
Revision No : 00	Prepared By : D V SUBBA RAO ,Associate Professor	Approved By : HOD

Tools: B	lack board, PPTs, Moodle						
No. of	TOPIC	Date	Mode of Delivery				
Periods			•				
UNIT-I Characterization of Distributed Systems, System Models							
	evelop a familiarity with distributed file systems						
TEXT BO	OOK:						
George C	oulouris, Jean Dollimore, Tim Kindberg, "Distribute	ed Systems- Cone	cepts and Design",				
	lition, Pearson Publication						
1	Characterization of Distributed Systems	06-04-2021					
2	Examples of Distributed Systems	07-04-2021	*				
3	Trends in distributed systems	08-04-2021					
4	Resource Sharing and the Web	09-04-2021					
5	Challenges	12-04-2021					
6	System Models: Introduction	15-04-2021	Lecture interspersed				
7	Architectural Models, Software Layers	16-04-2021	with discussions				

17-04-2021

19-04-2021

20-04-2021

22-04-2021

23-04-2021

24-04-2021

26-04-2021

# Tutorial classes **UNIT-II** Interprocess Communication

Failure Model

Security Model

Interface and Objects

System Architecture, variations

Fundamental Models-Interaction Model

Design Requirements for Distributed Architectures

#### CO2:

8

9

10

11

12

13

14

Describe important characteristics of distributed systems and the salient architectural features of such systems

# **TEXT BOOK:**

George Coulouris, Jean Dollimore, Tim Kindberg, "Distributed Systems- Concepts and Design", Fourth Edition, Pearson Publication

15	Interprocess Communication: Introduction	27-04-2021	
16	The API for the Internet Protocols: The Characteristics of Interprocess communication	28-04-2021	
17	Sockets	29-04-2021	
18	Udp datagram communication	30-04-2021	Lastura intercongrand
19	TCP Stream Communication	01-05-2021	Lecture interspersed with discussions
20	External Data Representation and Marshalling;	03-05-2021	with discussions
21	Client Server Communication;	04-05-2021	
22	Group Communication- IP Multicast implementation of group communication	05-05-2021	
23	Reliability and Ordering of Multicast.	06-05-2021	
24	Tutorial classes	07-05-2021	

No. of	TOPIC	Date	Mode of Delivery
Periods			

#### **UNIT-III: Distributed Objects and Remote Invocation**

#### CO3:

Describe important characteristics of distributed systems and the salient architectural features of such systems

#### **TEXT BOOK:**

George Coulouris, Jean Dollimore, Tim Kindberg, "Distributed Systems- Concepts and Design", Fourth Edition, Pearson Publication

25	Distributed Objects and Remote Invocation: Introduction	10-05-2021	
26	Communication between Distributed Objects- Object Model	11-05-2021	
27	Distributed Object Model	12-05-2021	Lecture interspersed
28	Design Issues for RMI	13-05-2021	with discussions
29	Implementation of RMI	15-05-2021	With discussions
30	Distributed Garbage Collection	17-05-2021	
31	Remote Procedure Call	18-05-2021	
32	Events and Notifications	19-05-2021	
33	Case Study: JAVA RMI	20-05-2021	
34	Tutorial classes	21-05-2021	

# **UNIT-IV** Operating System Support

#### CO4

Describe the features and applications of important standard protocols which are used in distributed systems

#### **TEXT BOOK:**

George Coulouris, Jean Dollimore, Tim Kindberg, "Distributed Systems- Concepts and Design", Fourth Edition, Pearson Publication

35	Operating System Support: Introduction	22-05-2021	
36	The Operating System Layer	24-05-2021	
37	Protection	25-05-2021	Lecture interspersed
38	Processes and Threads: -Address Space	26-05-2021	with discussions
39	Creation of a New Process	27-05-2021	with discussions
40	Threads.	28-05-2021	
41	Tutorial classes	29-05-2021	

No. of	TOPIC	Date	Mode of Delivery
Periods			

# **UNIT-V** Distributed File Systems, Coordination and Agreement CO 5:

Describe the features and applications of important standard protocols which are used in distributed systems

#### **TEXT BOOK:**

George Coulouris, Jean Dollimore, Tim Kindberg, "Distributed Systems- Concepts and Design", Fourth Edition, Pearson Publication

42	Distributed File Systems: Introduction	31-05-2021	
43	File Service Architecture	01-06-2021	
44	Peer-to-Peer Systems: Introduction	02-06-2021	
45	Napster and its Legacy	03-06-2021	
46	Peer-to-Peer Middleware	04-06-2021	
47	Routing Overlays	05-06-2021	
48	Tutorial classes	07-06-2021	Lecture interspersed
49	Coordination and Agreement: Introduction	08-06-2021	with discussions
50	Distributed Mutual Exclusion	09-06-2021	
51	Algorithm for Mutual Exclusion	10-06-2021	
52	Elections(ring based)	11-06-2021	
53	The Bully algorithm	14-06-2021	
54	Multicast Communication.	15-06-2021	
55	Ordered multicast	16-06-2021	
56	Tutorial classes	17-06-2021	

#### **UNIT-VI** Transactions & Replications

**CO6:** Gaining practical experience of inter process communication in a distributed environment.

#### **TEXT BOOK:**

George Coulouris, Jean Dollimore, Tim Kindberg, "Distributed Systems- Concepts and Design", Fourth Edition, Pearson Publication

57	Transactions & Replications: Introduction	18-06-2021	
58	System Model	19-06-2021	
59	Group Communication	21-06-2021	
60	Time ordering concurrency control	22-06-2021	
61	Optimistic concurrency control	23-06-2021	T4 :4
62	Distributed Dead Locks	24-06-2021	Lecture interspersed with discussions
63	Transaction priorities	25-06-2021	with discussions
64	Transaction Recovery; Replication-Introduction	26-06-2021	
65	Passive (Primary) Replication	28-06-2021	
66	Active Replication.	29-06-2021	
67	Tutorial classes	30-06-2021	

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		AGEMENT SCIENCE (R1642052)	Page No: 01 of	02
Section: C		Date: 07-04-21	Approved By:	
Revision N	lo: 00	Prepared By: G. KIRAN	Approved by.	HOD
Tools: Bla	ck board,	PPT'S		
No. of			Date	Mode of
Periods (Actual		TOPIC	(Taught on)	Delivery
Taken)			` "	
	ntroducti	on to Management		
CO 1. Ahl	le to under	stand the concept and nature of manag	gement, evaluation of man	agement
theories, m	notivation,	and leadership styles.		
TB: Dr A	R. Arvas	ri, Management Science' TMH 2011.		
1	Introduc	ction to management		
2	Nature d	& importance of management		
3	Generic	function of management		
4	Evaluat	ion of management thoughts	From	Online classes
5		ion theories	07/04/21	in MS TEAMS
6	Decisio	n making process	To	
7	Designi	ng organization structure	23/04/21	
8	Principl	es & types of organization		
9	Organiz	zation typology		
10	Global	leadership		
CO 2: Ab	Operation of the to equip	als and types of management  ns Management  with concepts of operations, project r	management and inventor	y control.
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TOWN IX	D 4 Management		
UNIT-IV:	Project Management e to equip with different techniques in project manage	ement ie	
CO 4: Abl	e to equip with different techniques in project manage CPM and project crashing	Miche, 1.0.,	
	R. Aryasri, Management Science' TMH 2011		
31	Introduction to PERT and CPM		
32	Development of network diagram		
33	Difference between pert and CPM	From	
34 Identifying critical part		19/05/21	Online classes
35 Probability		То	in MS
36	Project crashing simple problems	09/06/21	TEAMS
37	Problems		
CO 5: Ab	Strategic Management le to equip with the concept and practical issues relati	ng to strategic manaş	gement.
<b>TB:</b> Dr. A	. R. Aryasri, Management Science' TMH 2011  Vision, mission, goals and strategy		
39	Elements of corporate planning process		
40	SWOT analysis	From	
40	Steps in strategic formulation and	10/06/21	Online classes
41	implementation	То	in MS TEAMS
42	Generic strategy and global strategy	24/06/21	TEANS
43	Theories of MNCs		
44	Environmental scanning		
UNIT-VI	: Contemporary Management Practices		
CO 6: Ab	le to equip with the contemporary management practi A. R. Aryasri, Management Science' TMH 2011	ices.	
45	Basic concepts of MIS		
46	Total quality management		
47	Six sigma		
48	Supply chain management		
49	Enterprise resource planning	From	Online classes
50	Business process outsources	25/06/21 To	in MS
51	Business process re-engineering	09/07/21	TEAMS
52	Bench Marking	05/07/21	
53	Balanced Score Card		
54	Material Requirement Planning		
55	Total quality management		

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# TENTATIVE LESSON PLAN

Section: C	SE-B	<b>Date:</b> 07-04-21	Page No: 01 of	02	
Revision N		Prepared By: SRINIVAS. V	Approved By: I	HOD	
Tools: Bla					
No. of Periods (Actual Taken)		TOPIC	Date (Taught on)	Mode of Delivery	
	ntroducti	ion to Management			
CO 1: Abl	e to under	rstand the concept and nature of manage	ment, evaluation of man	agement	
		, and leadership styles.			
TB: Dr. A	. R. Aryas	sri, Management Science' TMH 2011.			
1	Introdu	ction to management			
2		& importance of management			
3		function of management		0-1:1	
4		tion of management thoughts	From	Online classes in MS TEAMS	
- 5		tion theories	07/04/21	III WIS TEAWIS	
6		n making process	То		
7		ing organization structure	23/04/21		
8		les & types of organization			
9		zation typology			
10		leadership als and types of management			
and the state of t		ons Management			
12	Work s	sri, Management Science' TMH 2011. study cal quality control			
14	Contro			Online classes	
15		ns On Control Charts	From	in MS TEAM	
16		al Management	24/04/21		
17		For Inventory Control	To		
19		and ABC Analysis	04/05/21		
20	_	ms On EOQ			
21	Other I	Methods Of EOQ			
UNIT-III	: Functio	nal management			
CO 3: Ab	le to unde	erstand the different functional areas in	an organization and their	r responsibilities	
product lis	fe cycle ar	nd channels of distribution.			
TB: Dr. A	. R. Arya	sri, Management Science' TMH 2011			
22	Conce	ot of HRM, HRD and PMIR			
23	Function	ons of HRM			
24	Wage	payment plans			
25		olution Vs merit rating	From	0 11 1	
26		ting management functions	05/05/21	Online classe	
27		ting strategies based on plc	To 10/05/21	in MS TEAMS	
28		els of distribution	10/03/21	IEANS	
29		ional change management			
30		ons of marketing			
20	T WILL CIT				

IINIT_IV	: Project Management		
	le to equip with different techniques in project manag	ement, i.e.,	
	CPM and project crashing		
	a. R. Aryasri, Management Science' TMH 2011		
31	Introduction to PERT and CPM		
32	Development of network diagram		
33	Difference between pert and CPM	From	
34 Identifying critical part		19/05/21	Online classes
35	Probability	To	in MS
36	Project crashing simple problems	09/06/21	TEAMS
37	Problems		
CO 5: Ab	Strategic Management ble to equip with the concept and practical issues relate A. R. Aryasri, Management Science' TMH 2011	ing to strategic mana	gement.
38	Vision, mission, goals and strategy		
39	Elements of corporate planning process		
40	SWOT analysis	From	Online classes in MS TEAMS
41	Steps in strategic formulation and implementation	10/06/21 To	
42	Generic strategy and global strategy	24/06/21	T ET HIVE
43	Theories of MNCs		
44	Environmental scanning		
<b>CO 6:</b> Al <b>TB:</b> Dr. A	I: Contemporary Management Practices ole to equip with the contemporary management pract A. R. Aryasri, Management Science' TMH 2011	ices.	
45	Basic concepts of MIS		
46	Total quality management		
47	Six sigma		
48	Supply chain management	From	
49	Enterprise resource planning	From 25/06/21	Online classes
50	Business process outsources	To	in MS
51	Business process re-engineering	09/07/21	TEAMS
52	Bench Marking		
53	Balanced Score Card		
54	Material Requirement Planning		
55	Total quality management		

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Enikepadu, Vijayawada 521108 **Department of Computer Science Engineering** TENTATIVE LESSONPLAN

# **TENTATIVE LESSONPLAN: R1642053 MACHINE LEARNING**

	Course Title: MACHINE LEARNING	G
Section : IV BTECH	Date: 06/4/21	Page No : 01 of 03
Revision No: 00	Prepared by: D.ANUSHA	Approved by : HOD

Tools: MS Teams, PPTs, Moodle

CO1: Familiarity with a set of well-known supervised, unsupervised and semi-supervised TB: "Machine Learning: The art and science of algorithms that make sense of data", Petrological The ingredients of machine learning  The ingredients of machine learning  The problems that can be solved with machine learning  The output of machine learning  The output of machine learning  From  Online class Classification  Related tasks  Classification  Scoring  Class probability estimation  To Tutorial  NIT - II: Beyond binary classification  O2: Familiarity with a set of well-known supervised, unsupervised and semi-supervised ach, Cambridge  Beyond binary classification  A Beyond binary classification  Handling more than two classes  Regression  Concept learning  Concept learning  Concept learning  Concept learning  To with MS Teal  To Online class  From  24/04/21  Online class	No. of periods		Date	Mode of Delivery
The ingredients of machine learning The problems that can be solved with machine learning The output of machine learning Features The workhorses of machine learning Binary classification Related tasks Classification Scoring Related tasks Classification To Scoring Respond binary classification Tutorial  NIT - II: Beyond binary classification  O 2: Familiarity with a set of well-known supervised, unsupervised and semi-supervised ach, Cambridge Respond binary classification Beyond binary classification Regression Regression From Landling more than two classes Regression Regressio	CO1 : I	Familiarity with a set of well-known super lachine Learning: The art and science of		
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The output of machine learning Features The workhorses of machine learning Binary classification Related tasks Classification Scoring Class probability estimation Tutorial  NIT - II: Beyond binary classification  O 2: Familiarity with a set of well-known supervised, unsupervised and semi-supervised ach, Cambridge  B: "Machine Learning: The art and science of algorithms that make sense of data", Peter B: Regression  Handling more than two classes Regression  O aline class From Concept learning  Online class  Online class  With MS Teal  Online class  From Concept learning  Online class  Online class  Online class  Online class  From Concept learning  Online class		with machine learning		
From Online class From O7/04/21 To Prom O7/04/21 To Online class O7/04/21 To O		The output of machine learning		
6 Binary classification 7 Related tasks 8 Classification 9 Scoring 10 Ranking 11 Class probability estimation 12 Tutorial NIT – II : Beyond binary classification O 2 : Familiarity with a set of well-known supervised, unsupervised and semi-supervised ach, Cambridge B : "Machine Learning: The art and science of algorithms that make sense of data", Peter B : Beyond binary classification    Application   Beyond binary classification		Features	-	
Online class of the second semi-supervised and semi-supervised ach, Cambridge    Cambridge		The workhorses of machine learning	From	
Related tasks  Classification  Scoring  Ranking  Class probability estimation  Tutorial  NIT – II : Beyond binary classification  2 : Familiarity with a set of well-known supervised, unsupervised and semi-supervised ach, Cambridge  B : "Machine Learning: The art and science of algorithms that make sense of data", Peter ach, Cambridge  B eyond binary classification  Handling more than two classes  Regression  Unsupervised learning  Concept learning  Concept learning  To  With MS Tea		Binary classification		Online class
Classification  Scoring  Ranking  Class probability estimation  Class probability estimation  Tutorial  NIT - II: Beyond binary classification  C2: Familiarity with a set of well-known supervised, unsupervised and semi-supervised ach, Cambridge  B: "Machine Learning: The art and science of algorithms that make sense of data", Peter ach, Cambridge  Beyond binary classification  Handling more than two classes  Regression  Gunsupervised learning  Concept learning  Concept learning  Concept learning  Concept learning		Related tasks		with MS Team
9 Scoring 10 Ranking 11 Class probability estimation 12 Tutorial  NIT – II : Beyond binary classification  O 2 : Familiarity with a set of well-known supervised, unsupervised and semi-supervised ach, Cambridge  B : "Machine Learning: The art and science of algorithms that make sense of data", Peter ach, Cambridge  13 Beyond binary classification  14 Handling more than two classes 15 Regression 16 Unsupervised learning 17 Descriptive learning 18 Concept learning 19 Online class		Classification		- Cum
Class probability estimation  Tutorial  NIT – II : Beyond binary classification  O 2 : Familiarity with a set of well-known supervised, unsupervised and semi-supervised ach, Cambridge  B : "Machine Learning: The art and science of algorithms that make sense of data", Peter ach, Cambridge  Beyond binary classification  Handling more than two classes  Regression  Unsupervised learning  To  Online class  With More		Scoring		
Tutorial  O 2: Familiarity with a set of well-known supervised, unsupervised and semi-supervised ach, Cambridge  B: "Machine Learning: The art and science of algorithms that make sense of data", Peter ach, Cambridge  Beyond binary classification  Handling more than two classes  Regression  Unsupervised learning  To  Online class  Viet Meters  Online class				
NIT – II : Beyond binary classification  O 2 : Familiarity with a set of well-known supervised, unsupervised and semi-supervised B : "Machine Learning: The art and science of algorithms that make sense of data", Peter act, Cambridge  Beyond binary classification  Handling more than two classes  Regression  Unsupervised learning  To  Online class  Viet Meters  Viet Me		Class probability estimation		
O 2 : Familiarity with a set of well-known supervised, unsupervised and semi-supervised B : "Machine Learning: The art and science of algorithms that make sense of data", Peter ach, Cambridge  13 Beyond binary classification  14 Handling more than two classes  15 Regression  16 Unsupervised learning  17 Descriptive learning  18 Concept learning  19 To with More	- 1	Tutorial		
O 2 : Familiarity with a set of well-known supervised, unsupervised and semi-supervised B : "Machine Learning: The art and science of algorithms that make sense of data", Peter ach, Cambridge  Beyond binary classification  Handling more than two classes  Regression  Unsupervised learning  To  Online class  With Mean	NIT - I	: Beyond binary classificati		
Beyond binary classification  Handling more than two classes  Regression  Unsupervised learning  Descriptive learning  Concept learning  Concept learning  To with More	02 · Fo	miliante and	ised, unsupervised a	and semi-supervised
14 Handling more than two classes 15 Regression 16 Unsupervised learning 17 Descriptive learning 18 Concept learning 19 To with Mean			опат шаке	sense of data", Peter
16 Unsupervised learning 24/04/21 Online class 18 Concept learning To with MC III	14 I	landling more than		
16 Unsupervised learning 17 Descriptive learning 18 Concept learning 19 To With Mc m	15 R	Regression Regression		
18 Concept learning To With Mc m	16 L	Insupervised learning		
With Mc m	17 D	Descriptive learning		Online class
	18 C	oncept learning	To 04/05/21	with MS Teams



# Enikepadu, Vijayawada 521108 Department of Computer Science Engineering TENTATIVE LESSONPLAN

No. of periods	TOPIC	Date	Mode of Delivery
19	The hypothesis space	From	
20	Paths through the hypothesis space	24/04/21	Online class
21	Beyond conjunctive concepts	To	with MS Teams
22	Tutorial	04/05/21	

UNIT - III: Tree models

#### CO 3: learning algorithms

TB: "Machine Learning: The art and science of algorithms that make sense of data", Peter Flach, Cambridge

23	Tree models		
24	Ranking and Probability estimation trees	From	
25	Tree learning as variance reduction		
26	Learning ordered rule lists	05/04/21	Online class
27	Learning unordered rule sets	To w	with MS Teams
28	First-order rule learning	10/05/21	
29	Tutorial		

UNIT IV: Linear models

### CO 4: The ability to implement some basic machine learning algorithms

TB: "Machine Learning: The art and science of algorithms that make sense of data", Peter Flach, Cambridge

30	The least-squares method		
31	The perceptron: a heuristic learning algorithm for linear classifiers		
32	Support vector machines		
33	obtaining probabilities from linear classifiers	From	
34	Going beyond linearity with kernel methods		Online class
35	Distance Based Models: Introduction,	To	with MS Teams
36	Neighbours and exemplars	09/06/21	
37	Nearest Neighbours classification		
38	Distance Based Clustering		
39	Hierarchical Clustering		
40	Tutorial		

UNIT V: Probabilistic models

CO 5: The ability to implement some basic machine learning algorithms

TB: "Machine Learning: The art and science of algorithms that make sense of data", Peter Flach, Cambridge



# Enikepadu, Vijayawada 521108 Department of Computer Science Engineering TENTATIVE LESSONPLAN

No. of periods	TOPIC	Date	Mode of Delivery	
41	The normal distribution and its geometric interpretations			
42	Probabilistic models for categorical data			
43	Discriminative learning by optimising conditional likelihood Probabilistic models	From		
44	Features: Kinds of features			
45	Tutorial	10/06/21	Online class with MS Teams	
46	Feature transformations	To		
47	Feature construction	24/06/21		
48	Feature selection			
49	Model ensembles: Bagging			
50	random forests			
51	Boosting			
52	Tutorial			

**UNIT VI: Probabilistic models** 

CO 5: The ability to implement some basic machine learning algorithms

TB: "Machine Learning: The art and science of algorithms that make sense of data", Peter Flach, Cambridge

53	Dimensionality Reduction		
54	Principal Component Analysis (PCA)		
55	Implementation		
56	Demonstration		
57	Artificial Neural Networks	To with N	
58	Introduction to Neural network representation		Online class with MS Teams
59	Appropriate problems for neural network learning	09/07/21	
60	Multilayer networks and the back propagation algorithm		
61	Tutorial		

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# TENTATIVE LESSON PLAN: R164205C

# OPERATIONAL RESEARCH

	Course Title: Operational Research	
Section:A	Date: 06/4/21	Page No: 01 of 04
Revision No: 00	Prepared By: A. RADHIKA	Approved By: HOD

Tools: MS Teams, PPTs, Moodle

No. of Periods	Topic	Date	Mode of Delivery
CO1: Iden syste	troduction To Operations Research tify and develop operational research mode em. nkara Iyer,"Operations Research", Tata Mo		
1	Introduction To Operations Research		
2	Scope and objectives of OR		
3	Phases of OR		
4	Models of OR		
5	Limitations of OR		
6	Linear Programming Formulation		
7	Linear Programming Problem	From	Online class
8	Graphical Solution of LPP	07/04/21 To 23/04/21	with MS Teams
9	Simplex method	23/04/21	
10	Artificial vVariables		
11	Big-M Method		
12	Two Phase method		
13	Degeneracy		
15	Unbound Solution		
16	Tutorial		
UNIT-II: T	ransportation Problem		
CO2: Unde	erstand the mathematical tools that are need	eded to solve optimize	ation problems fo
transporta	tion problem		
TB:" P. Sa	nkara Iyer," Operations Research", Tata M	cGraw-Hill, 2008 "	
17	Transportation Problem		
18	Formulation		
19	Balanced Transportation Problem		
20	Unbalanced Transportation Problem.		
21	Finding Basic Feasible Solutions:	The state of the s	
	Northwest Corner Rule	From 24/04/21	Online class
21	Least Cost Method	To 04/05/21	with MS Teams
22	Vogel's Approximation Method		

23	Optimality Test: The Stepping stone Method		
24	MODI Method		
25	Tutorial		
	III: Assignment Model		
CO3: \\ Assign	Understand the mathematical tools that are needed ment model  2. Sankara Iyer," Operations Research", Tata McG		tion problems for
26	Assignment Model		
27	Formulation		
28	Hungarian Method For Optimal Solution		
29	Solving Unbalanced Problem		
30	Traveling Salesman Problem And		
	Assignment Problem	From	
32	Sequencing Models	05/04/21	
33	Solution Of Sequencing Problem	To	Online class
34	Processing N Jobs Through 2 Machines	18/05/21	with MS Teams
35	Processing N Jobs Through 3Machines		
36	Processing 2 Jobs Through M Machines		
37	Processing N Jobs Through M Machines		
	The state of the s		
	TUTORIAL IV: Dynamic Programming Understand the Dynamic Programming problems a	nd game theory P	roblems
UNIT- CO4: \(\) TB:" I			roblems
UNIT- CO4: 1	IV: Dynamic Programming Understand the Dynamic Programming problems a P. Sankara Iyer,"Operations Research", Tata McGi		roblems
UNIT- CO4: 1 TB:" I 39	IV: Dynamic Programming Understand the Dynamic Programming problems a P. Sankara Iyer,"Operations Research", Tata McGi UNIT-IV: Dynamic Programming		roblems
UNIT- CO4: 1 TB:" I 39	IV: Dynamic Programming Understand the Dynamic Programming problems a P. Sankara Iyer,"Operations Research", Tata McGi UNIT-IV: Dynamic Programming Characteristics Of Dynamic Programming		roblems
UNIT- CO4: 1 TB:" I 39 40 41	IV: Dynamic Programming Understand the Dynamic Programming problems a P. Sankara Iyer, "Operations Research", Tata McGr UNIT-IV: Dynamic Programming Characteristics Of Dynamic Programming Dynamic Programming Approach For		roblems
UNIT- CO4: 1 TB:" I 39 40 41	IV: Dynamic Programming Understand the Dynamic Programming problems a P. Sankara Iyer, "Operations Research", Tata McGi UNIT-IV: Dynamic Programming Characteristics Of Dynamic Programming Dynamic Programming Approach For Priority Management		roblems
UNIT- CO4: 13 TB:" I 39 40 41 42 43	IV: Dynamic Programming Understand the Dynamic Programming problems a P. Sankara Iyer, "Operations Research", Tata McGi UNIT-IV: Dynamic Programming Characteristics Of Dynamic Programming Dynamic Programming Approach For Priority Management Employment Smoothening Capital Budgeting Stage		roblems
UNIT- CO4: 1 TB:" I 39 40 41 42 43 44	IV: Dynamic Programming Understand the Dynamic Programming problems a P. Sankara Iyer, "Operations Research", Tata McGi UNIT-IV: Dynamic Programming Characteristics Of Dynamic Programming Dynamic Programming Approach For Priority Management Employment Smoothening Capital Budgeting Stage Coach/Shortest Path	raw-Hill, 2008 "	roblems
UNIT- CO4: 1 TB:" I 39 40 41 42 43 44	IV: Dynamic Programming Understand the Dynamic Programming problems a P. Sankara Iyer, "Operations Research", Tata McGr UNIT-IV: Dynamic Programming Characteristics Of Dynamic Programming Dynamic Programming Approach For Priority Management Employment Smoothening Capital Budgeting Stage Coach/Shortest Path Cargo Loading And Reliability Problems	From	roblems  Online class
UNIT- CO4: 1 TB:" I 39 40 41 42 43 44 45 46	IV: Dynamic Programming Understand the Dynamic Programming problems a P. Sankara Iyer, "Operations Research", Tata McGi UNIT-IV: Dynamic Programming Characteristics Of Dynamic Programming Dynamic Programming Approach For Priority Management Employment Smoothening Capital Budgeting Stage Coach/Shortest Path Cargo Loading And Reliability Problems Games Theory.	From 19/05/21	Online class
UNIT- CO4: 1 TB:" I 39 40 41 42 43 44 45 46 47	IV: Dynamic Programming Understand the Dynamic Programming problems a P. Sankara Iyer, "Operations Research", Tata McGr UNIT-IV: Dynamic Programming Characteristics Of Dynamic Programming Dynamic Programming Approach For Priority Management Employment Smoothening Capital Budgeting Stage Coach/Shortest Path Cargo Loading And Reliability Problems Games Theory. Competitive Games	From 19/05/21 To	Online class
UNIT- CO4: 1 TB:" I 39 40 41 42 43 44 45 46 47 48	IV: Dynamic Programming Understand the Dynamic Programming problems a P. Sankara Iyer, "Operations Research", Tata McGr UNIT-IV: Dynamic Programming Characteristics Of Dynamic Programming Dynamic Programming Approach For Priority Management Employment Smoothening Capital Budgeting Stage Coach/Shortest Path Cargo Loading And Reliability Problems Games Theory. Competitive Games Rectangular Game	From 19/05/21	Online class
UNIT- CO4: 1 TB:" I 39 40 41 42 43 44 45 46 47 48 49	IV: Dynamic Programming Understand the Dynamic Programming problems a P. Sankara Iyer, "Operations Research", Tata McGi UNIT-IV: Dynamic Programming Characteristics Of Dynamic Programming Dynamic Programming Approach For Priority Management Employment Smoothening Capital Budgeting Stage Coach/Shortest Path Cargo Loading And Reliability Problems Games Theory. Competitive Games Rectangular Game Saddle Point Minimax (Maximin) Method Of Optimal	From 19/05/21 To	Online class
UNIT- CO4: 1 TB:" I 39 40 41 42 43 44 45 46 47 48 49 50	IV: Dynamic Programming Understand the Dynamic Programming problems a P. Sankara Iyer, "Operations Research", Tata McGr UNIT-IV: Dynamic Programming Characteristics Of Dynamic Programming Dynamic Programming Approach For Priority Management Employment Smoothening Capital Budgeting Stage Coach/Shortest Path Cargo Loading And Reliability Problems Games Theory. Competitive Games Rectangular Game Saddle Point Minimax (Maximin) Method Of Optimal Strategies	From 19/05/21 To	Online class
UNIT- CO4: 1 TB:" I 39 40 41 42 43 44 45 46 47 48 49 50	IV: Dynamic Programming Understand the Dynamic Programming problems a P. Sankara Iyer, "Operations Research", Tata McGi UNIT-IV: Dynamic Programming Characteristics Of Dynamic Programming Dynamic Programming Approach For Priority Management Employment Smoothening Capital Budgeting Stage Coach/Shortest Path Cargo Loading And Reliability Problems Games Theory. Competitive Games Rectangular Game Saddle Point Minimax (Maximin) Method Of Optimal Strategies Value Of The Game	From 19/05/21 To	Online class
UNIT- CO4: 13 TB:" H 39 40 41 42 43 44 45 46 47 48 49 50	IV: Dynamic Programming Understand the Dynamic Programming problems a P. Sankara Iyer, "Operations Research", Tata McGi UNIT-IV: Dynamic Programming Characteristics Of Dynamic Programming Dynamic Programming Approach For Priority Management Employment Smoothening Capital Budgeting Stage Coach/Shortest Path Cargo Loading And Reliability Problems Games Theory. Competitive Games Rectangular Game Saddle Point Minimax (Maximin) Method Of Optimal Strategies Value Of The Game Solution Of Games With Saddle Point	From 19/05/21 To	
UNIT- CO4: N TB:" I 39 40 41 42 43 44 45 46 47 48 49 50	IV: Dynamic Programming Understand the Dynamic Programming problems a P. Sankara Iyer, "Operations Research", Tata McGi UNIT-IV: Dynamic Programming Characteristics Of Dynamic Programming Dynamic Programming Approach For Priority Management Employment Smoothening Capital Budgeting Stage Coach/Shortest Path Cargo Loading And Reliability Problems Games Theory. Competitive Games Rectangular Game Saddle Point Minimax (Maximin) Method Of Optimal Strategies Value Of The Game	From 19/05/21 To	Online class

57	TUTORIAL		
UNIT-	-V: Replacement Models		
CO5:	Understand the Replacement problems		
TB:" I	P. Sankara Iyer,"Operations Research", Tata McGr	aw-Hill, 2008"	
58	Replacement Models		
59	Replacement Of Items That Deteriorate		
	Whose Maintenance Costs IncreaseWith	From	
	Time Without Change In The Money Value.	10/06/21	
60	Replacement Of Items That Fail Suddenly	To	Online class
61	Individual Replacement Policy	24/06/21	with MS Teams
62	Group Replacement Policy		
63	Tutorial		
UNIT-	-VI: Inventory Models		
CO6:	Understand Inventory Models		
TB:" I	P. Sankara Iyer,"Operations Research", Tata McGr	aw-Hill, 2008 "	
64	Inventory Models		
65	Inventory Costs		
66	Models With Deterministic Demand-Model		
67	(A) Demand Rate	From	
	Uniform And Production Rate Infinite, Model	25/06/21	
68	(B) Demand Rate Non-Uniform	To	Online class
69	Production Rate infinite, Model	09/07/21	with MS Teams
70	Demand Rate Uniform		
71	Production Rate Finite		
/ 1	1 Todaction Plate 1 line		

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Signature of HOD 06/4/2/

# TENTATIVE LESSON PLAN: R164205C

# OPERATIONAL RESEARCH

	Course Title: Operational Research	
Section:B	Date: 06/4/21	Page No: 01 of 04
Revision No: 00	Prepared By: A. RADHIKA	Approved By: HOD

Tools: MS Teams, PPTs, Moodle

No. of Periods	Topic	Date	Mode of Delivery
	A A A TO A DO A		Denvery
	ntroduction To Operations Research	1.6	· · · · · · · · · · · · · · · · · · ·
	entify and develop operational research mode tem.	eis from the verbal des	cription of the real
	ankara Iyer,"Operations Research", Tata M	cCraw-Hill 2008 "	
1	Introduction To Operations Research	Coran IIII, 2000	T
2	Scope and objectives of OR		
3	Phases of OR		
4	Models of OR		
5	Limitations of OR		
6	Linear Programming Formulation		
7	Linear Programming Problem	From	Online class
8	Graphical Solution of LPP	07/04/21 To 23/04/21	with MS Teams
9	Simplex method	23/04/21	
10	Artificial vVariables		
11	Big-M Method		
12	Two Phase method		
13	Degeneracy		
15	Unbound Solution		
16	Tutorial		
UNIT-II:	Transportation Problem		
CO2: Un	derstand the mathematical tools that are ne	eded to solve optimiz	ation problems fo
	ation problem		
	ankara Iyer," Operations Research", Tata M	lcGraw-Hill, 2008 "	
17	Transportation Problem		
18	Formulation		
19	Balanced Transportation Problem		
20	Unbalanced Transportation Problem.		
21	Finding Basic Feasible Solutions:		
	Northwest Corner Rule	From 24/04/21	Online class
21	Least Cost Method	To 04/05/21	with MS Teams
22	Vogel's Approximation Method		

23	Optimality Test: The Stepping stone Method		
24	MODI Method		
25	Tutorial		
UNIT.	III: Assignment Model	J	
CO3: Assign	Understand the mathematical tools that are needed ment model P. Sankara Iyer," Operations Research", Tata McC		tion problems for
26	Assignment Model		
27	Formulation	From 05/04/21 To 18/05/21	Online class with MS Teams
28	Hungarian Method For Optimal Solution		
29	Solving Unbalanced Problem		
30	Traveling Salesman Problem And		
	Assignment Problem		
32	Sequencing Models		
33	Solution Of Sequencing Problem		
34	Processing N Jobs Through 2 Machines		
35	Processing N Jobs Through 3Machines		
36	Processing 2 Jobs Through M Machines		
37	Processing N Jobs Through M Machines		
38	TUTORIAL		
TB:" I	Understand the Dynamic Programming problems a P. Sankara Iyer,"Operations Research", Tata McG UNIT-IV: Dynamic Programming	raw-Hill, 2008 "	oblems
40	Characteristics Of Dynamic Programming		
41	Dynamic Programming Approach For	From	
	Priority Management		
42	Employment Smoothening		
43	Capital Budgeting		
44	Stage		
	Coach/Shortest Path		
45			
	Cargo Loading And Reliability Problems	From	
46	Cargo Loading And Reliability Problems Games Theory.	From 19/05/21	Online class
46 47			
46 47 48	Games Theory.	19/05/21	
46 47 48 49	Games Theory. Competitive Games Rectangular Game Saddle Point	19/05/21 To	
46 47 48 49	Games Theory. Competitive Games Rectangular Game	19/05/21 To	
46 47 48 49 50	Games Theory. Competitive Games Rectangular Game Saddle Point Minimax (Maximin) Method Of Optimal	19/05/21 To	
46 47 48 49 50	Games Theory. Competitive Games Rectangular Game Saddle Point Minimax (Maximin) Method Of Optimal Strategies	19/05/21 To	
46 47 48 49 50 51 52	Games Theory. Competitive Games Rectangular Game Saddle Point Minimax (Maximin) Method Of Optimal Strategies Value Of The Game	19/05/21 To	Online class with MS Teams
46 47 48 49 50 51 52 54 55	Games Theory. Competitive Games Rectangular Game Saddle Point Minimax (Maximin) Method Of Optimal Strategies Value Of The Game Solution Of Games With Saddle Point	19/05/21 To	

57	TUTORIAL		
UNIT-	-V: Replacement Models		
CO5: 1	Understand the Replacement problems		
<b>TB:</b> " I	P. Sankara Iyer,"Operations Research", Tata McGr	aw-Hill, 2008"	
58	Replacement Models	From 10/06/21 To 24/06/21	Online class with MS Teams
59	Replacement Of Items That Deteriorate		
	Whose Maintenance Costs IncreaseWith		
	Time Without Change In The Money Value.		
60	Replacement Of Items That Fail Suddenly		
61	Individual Replacement Policy		
62	Group Replacement Policy		
63	Tutorial		
UNIT-	-VI: Inventory Models		
CO6:	Understand Inventory Models		
TB:" I	P. Sankara Iyer,"Operations Research", Tata McGr	aw-Hill, 2008 "	
64	Inventory Models	From 25/06/21 To 09/07/21	
65	Inventory Costs		
66	Models With Deterministic Demand-Model		
67	(A) Demand Rate		
	Uniform And Production Rate Infinite, Model		
68	(B) Demand Rate Non-Uniform		Online class with MS Teams
69	Production Rate infinite, Model		
70	Demand Rate Uniform		
71	Production Rate Finite		
72	Tutorial		

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