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: R1921051

Course Title: MATHEMATICAL FOUNDATION FOR COMPUTER SCIENCE		
Section: CSE A& B	**Date : 17-08-2020**	**Page No :00**
Revision No :00	**Prepared By: G.Koteswaramma**	**Approved By : HOD**
Tools: Black board		

CO1: Student will be able to demonstrate skills in solving mathematical problems.

No. of Periods	TOPIC	DATE	Mode of Delivery
	UNIT – I Mathematical Logic		
1.	Statements, Notations, Connectives, Well defined Formulas	From: 17/08/20 To: 05/09/20	Lecture interspersed with discussions
2.	Truth tables, Tautologies		
3.	Equivalence of formulas		
4.	Duality law, Tautological Implications		
5.	Normal forms		
6.	Tutorial class		
7.	Theory of inference for statement calculus		
8.	Consistency of premises		
9.	Indirect method of proof		
10.	Predicative Logic, statement functions		
11.	Tutorial class		
12.	Variables and Quantifiers, free & bound variables		
13.	Inference theory of predicate calculus		
14.	Formulas		
	UNIT-II:SET THEORY		
CO2: Student will be able to demonstrate knowledge of mathematical modeling and proficiency in using mathematical software. CO3:students will be able to manipulate and analyze data numerically using Appropriate software.			
15.	Introduction to sets, operations on Binary sets	From: 07/09/20 To: 30//09/20	Lecture interspersed with discussions
16.	Principle of Inclusion and Exclusion		
17.	Relations, Properties of binary relations		
18.	Relation matrix and Digraph		
19.	Partition and covering, transitive closure		
20.	Tutorial class		
21.	Equivalence relations, compatibility relations,		
22.	Partial ordering relations, Hasse diagram		
23.	Bijective Functions and composition of functions		
24.	Inverse functions, recursive functions, permutation functions		
25.	Equivalence relations, compatibility relations,		
26.	Equivalence relations, compatibility relations,		

27.	Bijective Functions and composition of functions		
28.	Inverse functions, recursive functions, permutation functions		
29.	Algebraic structures: algebraic systems, examples and properties		
30.	Semi groups and monoids, group definitions, examples.		
31.	Homomorphism, Isomorphism		
32.	groups, sub group definitions, examples		
33.	Group, Subgroup, Abelian Group, Homomorphism, Isomorphism		
34.	Properties of integers, division theorem		
35.	GCD, Euclidean algorithm		
36.	LCM, Testing for prime numbers		
37.	The fundamental theorem of Arithmetic		
38.	Modular Arithmetic, Euler and Fermat's theorems		
	UNIT-3: Combinatorics&number theory		Lecture interspersed with discussions
CO4: Student will be able to communicate effectively mathematical ideas results verbally or in Wrting. "Discrete Mathematical Structures with Applications of computer Science" by J.P.Trembly andp.manohar			
39.	Basics of counting, permutations	From: 01/10/20 To: 17/10/20	
40.	Permutations with Repetitions		
41.	Circular Permutations, Restricted Permutations		
42.	Combinations, Restricted Combinations		
43.	Tutorial Class		
44.	Generating functions of permutations and combinations		
45.	Binomial and multinomial coefficients		
46.	Binomial and multinomial theorems		
47.	Coloring and chromatic numbers		
48.	Pigeonhole Principle and its allpications		
49.	Revision		
	UNIT-4: Recurrence Relations		Lecture interspersed with discussions
CO5: Student will be able to manipulate and analyze data generatically and recurrencingly. "Discrete Mathematical Structures with Applications of computer Science" by J.P.Trembly andp.manohar			
50.	Generating Functions	From: 19/10/20 To: 31/10/20	
51.	Function of Sequences		
52.	Partial Fractions		
53.	Coefficient of generating functions		
54.	Recurrence relations		
55.	Formulation as recurrence relations		
56.	Recurrence relations by substitution		
57.	Recurrence relations by Generating functions		
58.	Tutorial class		
59.	Recurrence relations by method of characteristics roots		
60.	Inhomogeneous Recurrence relations		
61.	Recurrence relations by Generating		

	functions		
	UNIT-5: Graph Theory		
CO6: Student will be able to manipulate and analyze data graphically using Appropriate software. "Discrete Mathematical Structures with Applications of computer Science" by J.P.Trembly andp.manohar			
62.	Basic concepts of graphs, sub graphs	From: 02/11/20 To: 12/11/20	Lecture interspersed with discussions
63.	Representation of graphs: Adjacency, Incidence matrices		
64.	Isomorphic graphs		
65.	Paths.circuits, Elerian and Hamiltonian graphs		
66.	Multi graphs, Problems		
67.	Tutorial class		
68.	Planar graphs, Euler's formula		
69.	Chromatic numbers		
70.	Spanning trees, Algorithms for spanning trees.		
71.	Breadth first search algorithms		
72.	Depth first search algorithm		
73.	Krushkal,s algorithm		
74.	Prims algorithm		

G. Koteswaramma
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TENTATIVE LESSON PLAN: R1921052
SOFTWARE ENGINEERING

Course Title: SOFTWARE ENGINEERING (R1921052)		
Section : Sec A & B	**Date : 17/08/2020**	**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:** ➢ **Software Engineering and Software Process:** **CO 1 :** Knowledge of basic Software Engineering methods and practices, and their appropriate applications. General understanding of software process models such as the waterfall and evolutionary models. **TB: 1. Software Engineering-A Practitioner's Approach -- Roger S. Pressman**			
1	**UNIT-1:** The Nature of Software	18-8-2020	Lecture interspersed with discussions Online Classes with MS Teams
2	The Unique Nature of WebApps	19-8-2020	
3	Software Engineering	20-8-2020	
4	The Software Process	21-8-2020	
5	Software Engineering Practice	22-8-2020	
6,7	Software Myths.	25,26-8-2020	
8	A Generic Process Model	27-8-2020	
9	Process Assessment and Improvement	28-8-2020	
10,11	Prescriptive Process Models	29,31-8-2020	
12,13	Specialized Process Models	01,02-9-2020	
14	The Unified Process	03-9-2020	
15	Personal and Team Process Models	04-9-2020	
16	Tutorial	05-9-2020	

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-II : ➢ **Agile Process:** ➢ **Requirements Engineering:** **CO 2 :** Understanding of the role of Agile development and management including planning, scheduling, risk management, etc. Understanding of software requirements and the SRS document. **TB: 1. Software Engineering-A Practitioner's Approach -- Roger S. Pressman**			
17	**UNIT –II:** Agility, Agility and the Cost of Change	7-9-2020	Lecture interspersed with discussions Online Classes with MS Teams
18,19	Agile Process, Principles	8,9-9-2020	
20	Extreme Programming	10-9-2020	
21	Other Agile Process Models	11-9-2020	
22	A Tool Set for the Agile Process	12-9-2020	
23	Software Engineering Knowledge	14-9-2020	
24	Core Principles	15-9-2020	
25,26	Principles That Guide Each Framework Activity	16,17-9-2020	
27	Requirements Engineering	18-9-2020	
28	Establishing the Groundwork	19-9-2020	
29	Eliciting Requirements	22-9-2020	
30	Developing Use Cases, Building the Requirements Model,	23-9-2020	
31	Negotiating Requirements, Validating Requirements	24-9-2020	
32	Tutorial	25-9-2020	
No. of Periods	**TOPIC**	**Date**	**Mode of Delivery**
UNIT-III : ➢ **Requirements Analysis :** ➢ **The Modeling Strategies :** **CO 3:** Able to understand of different software architectural styles. Understanding of implementation issues such as modularity and coding standards. **TB: 1. Software Engineering-A Practitioner's Approach -- Roger S. Pressman**			
33	Requirements Analysis	29-9-2020	

34	Scenario-Based Modeling	30-9-2020	Lecture interspersed with discussions Online Classes with MS Teams
35	UML Models that Supplement the Use Case	1-10-2020	
36	Data Modeling Concepts	3-10-2020	
37	Class-Based Modeling	6-10-2020	
38	Requirements Modeling Strategies	7-10-2020	
39	Flow- Oriented Modeling	8-10-2020	
40	Creating a Behavioral Mode	9-10-2020	
41	Patterns for Requirements Modelling	12-10-2020	
42	Requirements Modeling for WebApps	13-10-2020	
41	Tutorial	14-10-2020	

UNIT-IV :

- **The Design Process:**
- **Software Architecture:**

CO 4 : Able to understand of approaches to design Process and understanding of software architecture designs

TB: 1. Software Engineering-A Practitioner's Approach -- Roger S. Pressman

No. of Periods	TOPIC	Date	Mode of Delivery
42	Design within the Context of Software Engineering,	15-10-2020	Lecture interspersed with discussions Online Classes with MS Teams
43	The Design Process	16-10-2020	
44	Design Concepts	17-10-2020	
45	The Design Model	20-10-2020	
46	Software Architecture	21-10-2020	
47	Architectural Genres	22-10-2020	
48	Architectural Styles	26-10-2020	
49	Assessing Alternative Architectural Designs	27-10-2020	
50	Architectural Mapping Using Data Flow Components	28-10-2020	

51	Designing Class-Based Components	30-10-2020	Online Classes with MS Teams
52	Conducting Component-Level Design	31-10-2020	
53	Component-Level Design for WebApps	01-11-2020	
54	Designing Traditional Components	02-11-2020	
55	Component-Based Development	03-11-2020	
56	Tutorial	05-11-2020	

UNIT-V :

- **User Interface design:**
- **Testing:**

CO 5 : Understanding of software testing approaches such as unit testing and integration testing. Understanding on quality control and how to ensure good quality software.

TB: 1. Software Engineering-A Practitioner's Approach -- Roger S. Pressman

57	UNIT V The Golden Rules	18-1-2021	Lecture interspersed with discussions Online Classes with MS Teams
58	User Interface Analysis and Design,	19-1-2021	
65	Interface Analysis	21-1-2021	
66	Interface Design Steps	22-1-2021	
67	WebApp Interface Design	23-1-2021	
68	Design Evaluation	25-1-2021	
69	Elements of Software Quality Assurance	26-1-2021	
70	SQA Tasks, Goals & Metrics,	27-1-2021	
71	Statistical SQA	28-1-2021	
72	Software Reliability Software	03-2-2021	
73	A Strategic Approach to Software Testing	04-2-2021	
74	Strategic Issues	05-2-2021	
75	Test Strategies for Conventional Software	06-2-2021	
76	Test Strategies for Object Oriented software	08-2-2021	
77	Test Strategies for WebApps	09-2-2021	
78	Validation Testing, System Testing	10-2-2021	

79	The Art of Debugging	11-2-2021	Lecture interspersed with discussions
80	Testing Fundamentals	12-2-2021	
81	Internal and External Views of Testing	13-2-2021	
82	White-Box Testing	15-2-2021	
83	Basics of Path Testing	16-2-2021	
84	Tutorial	17-2-2021	

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

TENTATIVE LESSON PLAN: R1921053

Course Title : PYTHON PROGRAMMING		
Section : CSE A&B	**Date : 15-08-2020**	
Revision No : 00	**Prepared By** : D.V.V.BRAHMACHARI	**Approved By : HOD**

Tools: MS TEAMS, PPTs

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-1: Introduction **CO-1: To learn about Python programming language syntax, semantics, and the runtime environment** **Text Book:Fundamentals of Python First Programs, Kenneth. A. Lambert, Cengage**			
1.	Introduction to Python	15-08-2020 TO 29-08-2020	Online Classes With Ms Teams
2.	Program Development Cycle		
3.	Input processing and output		
4.	Displaying Output with the Print Function		
5.	Comments, Variables, Reading Input from the Keyboard		
6.	Performing Calculations. operators		
7.	Type conversions		
8.	Expressions, More about Data Output		
9.	**Data Types, and Expression:** Strings Assignment, and Comment		
10.	Numeric Data Types and Character Sets, Using functions and Modules		
11.	**Decision Structures and Boolean Logic:** if, if-else, if-elif-else Statements		
12.	Nested Decision Structures		
13.	Comparing Strings, Logical Operators, Boolean Variables..		
14.	**Repetition Structures:** Introduction, while loop, for loop,		
15.	Calculating a Running Total, Input Validation Loops, Nested Loops		
16.	Tutorial		
UNIT-2: Control Statement **CO-2:** To learn about Python programming language syntax, semantics, and the runtime environmen **Text Book:**Fundamentals of Python First Programs, Kenneth. A. Lambert, Cengage			
17.	**Control Statement**: Definite iteration for Loop Formatting Text for output	31-08-2020 TO 14-09-2020	Online Classes With Ms Teams
18.	Selection if and if else Statement Conditional Iteration, The While Loop		
19.	**Strings and Text Files:** Accessing Character and Substring in Strings,		
20.	Data Encryption		
21.	String Methods Text Files		
22.	Strings and Number Systems		

23.	Tutorial		

UNIT –3List and Dictionaries

CO3: To be familiarized with general computer programming concepts like conditional execution, loops & functions

Text Book: Fundamentals of Python First Programs, Kenneth. A. Lambert, Cengage

24.	**List and Dictionaries**: Lists Defining Simple Functions, Dictionaries	15-09-2020 TO 30-09-2020	Online Classes With Ms Teams
25.	Problem Solving with Top Down Design, Design with Recursive Functions		
25.	Case Study Gathering Information from a File System		
26.	Managing a Program's Namespace		
27.	Higher Order Function		
28.	Modules: Modules, Standard Modules		
29.	Packages		
30.	Tutorial		

UNIT – 4: File Operations

CO4: Exemplify in a better way the I/O and memory organization.To be familiarized with general coding techniques and object-oriented programming

Text Book: Fundamentals of Python First Programs, Kenneth. A. Lambert, Cengage

No. of Periods	TOPIC		
31.	**File Operations**: Reading config files in python, Writing log files in python	01-10-2020 TO 20-10-2020	Online Classes With Ms Teams
32.	Understanding read functions, read(), readline() and readlines()		
33.	Understanding write functions, write() and writelines()		
34.	Manipulating file pointer using seek		
35.	**Programming using file operations Object Oriented Programming**: Concept of class		
36.	object and instances, Constructor		
37.	class attributes and destructors, Real time use of class in live projects		
38.	Inheritance , overlapping and overloading operators, Adding and retrieving dynamic attributes of classes		
39.	**Programming using Oops support Design with Classes:** Objects and Classes, Data modeling Examples,		
40.	Case Study An ATM, Case Study An ATM, Structuring Classes with Inheritance and Polymorphism		
41.	Case Study An ATM		
42.	Structuring Classes with Inheritance and Polymorphism		

UNIT – 5: Errors and Exceptions

CO5: To be familiarized with general coding techniques and object-oriented programming

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Text Book:: Fundamentals of Python First Programs, Kenneth. A. Lambert, Cengage

43.	**Errors and Exceptions**: Syntax Errors	**21-10-2020 TO 20-11-2020**	Online Classes With Ms Teams
44.	Exceptions, Handling Exceptions, Raising Exceptions		
45.	User-defined Exceptions, Defining Clean-up Actions, Redefined Clean-up Actions		
46.	**Graphical UserInterfaces**: The Behavior of Terminal Based Programs and GUI -Based, Programs		
47.	Coding Simple GUI-Based Programs		
48.	Other Useful GUI Resources		
49.	Programming: Introduction to Programming Concepts with Scratch		

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TENTATIVE LESSON PLAN: R1921054

Course Title : DATA STRUCTURES		
Section : Sec A	**Date : 15-08-2020**	
Revision No : 00	**Prepared By : Dr. D. HARITHA**	**Approved By : HOD**

Tools: MS TEAMS, PPTs

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-1: DATA STRUCTURES, SEARCHING SORTING **CO-1:** Summarize the properties, interfaces, and behaviors of basic abstract data types CO-2: Discuss the computational efficiency of the principal algorithms for sorting & searching **Text Book:** Data Structures Using C. 2nd Edition, Reema Thareja, Oxford.			
1.	Definition	**17-08-2020 TO 29-08-2020**	Online Classes With Ms Teams
2.	Classification of Data Structures		
3.	Operations on Data Structures		
4.	Abstract Data Type (ADT)		
5.	Preliminaries of Algorithms		
6.	Time and Space Complexity		
7.	Linear Search		
8.	Binary Search		
9.	Fibonacci Search		
10.	Insertion Sort		
11.	Selection Sort		
12.	Bubble Sort		
13.	Quick Sort		
14.	Radix Sort		
15.	Merge Sort		
UNIT-2: LINKED LIST **CO-3:** Use arrays, records, linked structures, stacks, queues, trees, and Graphs in writing programs **Text Book:** Data Structures Using C. 2nd Edition, Reema Thareja, Oxford.			
16.	Introduction	**31-08-2020 TO 14-09-2020**	Online Classes With Ms Teams
17.	Single Linked List		
18.	Representation of Linked List in Memory		
19.	Operations on Single Linked list-Insertion, Deletion, Search and Traversal		
20.	Reversing Single Linked list		
21.	Applications on Single Linked list- Polynomial Expression Representation		
22.	Addition and Multiplication		
23.	Sparse Matrix Representation using Linked List		
24.	Advantages and Disadvantages of Single Linked list		
25.	Double Linked list-Insertion, Deletion		
26.	Circular Linked list-Insertion, Deletion		
UNIT –3: QUEUES, STACKS **CO3:** Use arrays, records, linked structures, stacks, queues, trees, and Graphs in writing programs **Text Book:** Data Structures Using C. 2nd Edition, Reema Thareja, Oxford.			
27.	Introduction to Queues		
28.	Representation of Queues-using Arrays and using Linked list		
29.	Implementation of Queues-using Arrays and using		

	Linked list	15-09-2020 TO 30-09-2020	Online Classes With Ms Teams
30.	Application of Queues-Circular Queues, Deques		
31.	Priority Queues		
32.	Multiple Queues		
33.	Introduction to Stacks		
34.	Array Representation of Stacks		
35.	Operations on Stacks		
36.	Linked list Representation of Stacks		
37.	Operations on Linked Stack		
38.	Applications-Reversing list, Factorial Calculation		
39.	Infix to Postfix Conversion		
40.	Evaluating Postfix Expressions		

UNIT – 4: TREES

CO4: Demonstrate different methods for traversing trees

Text Book: Data Structures Using C. 2nd Edition, Reema Thareja, Oxford.

No. of Periods	TOPIC	DATE	Mode of Delivery
41.	Basic Terminology in Trees	01-10-2020 TO 20-10-2020	Online Classes With Ms Teams
42.	Binary Trees-Properties		
43.	Representation of Binary Trees using Arrays and Linked lists		
44.	Binary Search Trees- Basic Concepts		
45.	BST Operations: Insertion, Deletion, Tree Traversals		
46.	Applications-Expression Trees		
47.	Heap Sort		
48.	Balanced Binary Trees-AVL Trees, Insertion		
49.	Deletion and Rotations		

UNIT – 5: GRAPHS

CO4: Demonstrate different methods for traversing trees

Text Book: Data Structures Using C. 2nd Edition, Reema Thareja, Oxford.

50.	Basic Concepts	21-10-2020 TO 20-11-2020	Online Classes With Ms Teams
51.	Representations of Graphs-Adjacency Matrix and using Linked list		
52.	Graph Traversals (BFT & DFT)		
53.	Applications- Minimum Spanning Tree Using Prims Algorithm		
54.	Minimum Spanning Tree Using Kruskals Algorithm		
55.	Dijkstra's shortest path		
56.	Transitive closure		
57.	Warshall's Algorithm		

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TENTATIVE LESSON PLAN: R1921054

Course Title : DATA STRUCTURES		
Section : Sec B	**Date : 15-08-2020**	
Revision No : 00	**Prepared By : Dr. D. HARITHA**	**Approved By : HOD**

Tools: MS TEAMS, PPTs

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-1: DATA STRUCTURES, SEARCHING SORTING **CO-1:** Summarize the properties, interfaces, and behaviors of basic abstract data types CO-2: Discuss the computational efficiency of the principal algorithms for sorting & searching **Text Book:** Data Structures Using C. 2nd Edition, Reema Thareja, Oxford.			
1.	Definition	**17-08-2020 TO 29-08-2020**	Online Classes With Ms Teams
2.	Classification of Data Structures		
3.	Operations on Data Structures		
4.	Abstract Data Type (ADT)		
5.	Preliminaries of Algorithms		
6.	Time and Space Complexity		
7.	Linear Search		
8.	Binary Search		
9.	Fibonacci Search		
10.	Insertion Sort		
11.	Selection Sort		
12.	Bubble Sort		
13.	Quick Sort		
14.	Radix Sort		
15.	Merge Sort		
UNIT-2: LINKED LIST **CO-3:** Use arrays, records, linked structures, stacks, queues, trees, and Graphs in writing programs **Text Book:** Data Structures Using C. 2nd Edition, Reema Thareja, Oxford.			
16.	Introduction	**31-08-2020 TO 14-09-2020**	Online Classes With Ms Teams
17.	Single Linked List		
18.	Representation of Linked List in Memory		
19.	Operations on Single Linked list-Insertion, Deletion, Search and Traversal		
20.	Reversing Single Linked list		
21.	Applications on Single Linked list- Polynomial Expression Representation		
22.	Addition and Multiplication		
23.	Sparse Matrix Representation using Linked List		
24.	Advantages and Disadvantages of Single Linked list		
25.	Double Linked list-Insertion, Deletion		
26.	Circular Linked list-Insertion, Deletion		
UNIT –3: QUEUES, STACKS **CO3:** Use arrays, records, linked structures, stacks, queues, trees, and Graphs in writing programs **Text Book:** Data Structures Using C. 2nd Edition, Reema Thareja, Oxford.			
27.	Introduction to Queues		
28.	Representation of Queues-using Arrays and using Linked list		
29.	Implementation of Queues-using Arrays and using		

	Linked list	15-09-2020 TO 30-09-2020	Online Classes With Ms Teams
30.	Application of Queues-Circular Queues, Deques		
31.	Priority Queues		
32.	Multiple Queues		
33.	Introduction to Stacks		
34.	Array Representation of Stacks		
35.	Operations on Stacks		
36.	Linked list Representation of Stacks		
37.	Operations on Linked Stack		
38.	Applications-Reversing list, Factorial Calculation		
39.	Infix to Postfix Conversion		
40.	Evaluating Postfix Expressions		

UNIT – 4: TREES

CO4: Demonstrate different methods for traversing trees

Text Book: Data Structures Using C. 2nd Edition, Reema Thareja, Oxford.

No. of Periods	TOPIC	DATE	Mode of Delivery
41.	Basic Terminology in Trees	01-10-2020 TO 20-10-2020	Online Classes With Ms Teams
42.	Binary Trees-Properties		
43.	Representation of Binary Trees using Arrays and Linked lists		
44.	Binary Search Trees- Basic Concepts		
45.	BST Operations: Insertion, Deletion, Tree Traversals		
46.	Applications-Expression Trees		
47.	Heap Sort		
48.	Balanced Binary Trees-AVL Trees, Insertion		
49.	Deletion and Rotations		

UNIT – 5: GRAPHS

CO4: Demonstrate different methods for traversing trees

Text Book: Data Structures Using C. 2nd Edition, Reema Thareja, Oxford.

50.	Basic Concepts	21-10-2020 TO 20-11-2020	Online Classes With Ms Teams
51.	Representations of Graphs-Adjacency Matrix and using Linked list		
52.	Graph Traversals (BFT & DFT)		
53.	Applications- Minimum Spanning Tree Using Prims Algorithm		
54.	Minimum Spanning Tree Using Kruskals Algorithm		
55.	Dijkstra's shortest path		
56.	Transitive closure		
57.	Warshall's Algorithm		

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Department of Computer Science and Engineering

TENTATIVE LESSON PLAN: R1921055
OBJECT ORIENTED PROGRAMMING THROUGH C++

Course Title: Object Oriented Programming through C++ (R1921055)		
Section : Sec A	Date : 15/08/2020	Page No : 01 of 03
Revision No : 00	Prepared By : M Naresh Babu	Approved By : HOD

Tools: Black board, PPTs, Moodle

No. of Periods	TOPIC	Date	Mode of Delivery
Unit-1 Introduction to C++ **CO1: Describe the procedural and object oriented paradigm with concepts of streams, classes, functions, data and objects** **TB:" Programming in C++, Ashok N Kamthane, Pearson 2nd Edition**			
1	Introduction to C++: Difference between C and C++	17/8/20	Lecture interspersed with discussions
2	Evolution of C++	18/8/20	
3	The Object Oriented Technology	19/8/20	
4	Disadvantage of Conventional Programming	21/8/20	
5	Key Concepts of Object Oriented Programming	25/8/20 26/8/20	
6	Advantage of OOP	28/8/20	
7	Object Oriented Language	29/8/20 31/8/20	
8	Tutorial	1/9/20	
UNIT-II: Classes and Objects &Constructors and Destructor **CO2: Understand dynamic memory management techniques using pointers, constructors, destructors** **TB:" Programming in C++, Ashok N Kamthane, Pearson 2nd Edition "**			
9	Classes and Objects &Constructors and Destructor: Classes in C++	2/9/20	Lecture interspersed with discussions
10	Declaring Objects	7/9/20	
11	Access Specifiers and their Scope	8/9/20	
12	Defining Member Function	9/9/20	
13	Overloading Member Function	11/9/20 23/9/20	
14	Nested class, Constructors and Destructors	13/10/20 14/10/20	
15	Introduction, Constructors and Destructor	15/10/20	

		17/10/20	
16	Characteristics of Constructor and Destructor	19/10/20	
17	Application with Constructor	19/10/20	
18	Constructor with Arguments parameterized Constructor	20/10/20	
19	Destructors	20/10/20	
20	Anonymous Objects.	21/10/20	
21	Tutorial	21/10/20	
No. of Periods	**TOPIC**	**Date**	**Mode of Delivery**
UNIT-III: Operator Overloading and Type Conversion & Inheritance **CO3: Describe the concept of function overloading, operator overloading, virtual functions and polymorphism** **TB:" Programming in C++, Ashok N Kamthane, Pearson 2nd Edition "**			
22	Operator Overloading and Type Conversion & Inheritance: The Keyword Operator	22/10/20	Lecture interspersed with discussions
23	Overloading Unary Operator	23/10/20	
24	Operator Return Type	23/10/20	
25	Overloading Assignment Operator (=)	26/10/20	
26	Rules for Overloading Operators	27/10/20	
27	Inheritance, Reusability	28/10/20	
28	Types of Inheritance	29/10/20	
29	Virtual Base ClassesObject as a Class Member	31/10/20	
30	Abstract Classes	2/11/20	
31	Advantages of Inheritance	3/11/20	
32	Disadvantages of Inheritance	4/11/20	
33	Tutorial	29/12/20	
UNIT-IV: Pointers & Binding Polymorphisms and Virtual Functions **CO4: Classify inheritance with the understanding of early and late binding, usage of exception handling, generic programming** **TB:" Programming in C++, Ashok N Kamthane, Pearson 2nd Edition "**			
No. of Periods	**TOPIC**	**Date**	**Mode of Delivery**
34	Pointers & Binding Polymorphisms and Virtual Functions: Pointer	30/12/20	
35	Features of Pointers	31/12/20	
36	Pointer Declaration	18/1/21	
37	Pointer to Class	19/1/21	

38	Pointer Object	19/1/21	Lecture interspersed with discussions
39	The this Pointer	21/1/21	
40	Pointer to Derived Classes and Base Class	21/1/21	
41	Binding Polymorphisms and Virtual Functions	22/1/21	
42	Introduction, Binding in C++	23/1/21	
43	Virtual Functions	23/1/21	
44	Rules for Virtual Function	25/1/21	
45	Virtual Destructor	25/1/21	
46	Tutorial	27/1/21	
UNIT-V: Generic Programming with Templates & Exception Handling **CO5: Demonstrate an understanding of simple Entity-Relationship models for databases** **TB:" Fundamentals of Data Structures in C++, S.Sahni, University Press (India) Pvt.Ltd, 2nd edition, Universities Press, Pvt. Ltd. "**			
47	Generic Programming with Templates & Exception Handling: Definition of class Templates	28/1/21	Lecture interspersed with discussions
48	Normal Function Templates	29/1/1	
49	Over Loading of Template Function	29/1/21	
50	Bubble Sort Using Function Templates	30/1/21	
51	Difference between Templates and Macros	1/2/21	
52	Linked Lists with Templates	2/2/21	
53	Exception Handling	3/2/21	
54	Principles of Exception Handling	4/2/21	
55	The Keywords try throw and catch	5/2/21	
56	Multiple Catch Statements	6/2/21	
57	Specifying Exceptions	8/2/21	
58	Overview of Standard Template Library	9/2/21	
59	STL Programming Model	10/2/21	
60	Containers, Sequence Containers	11/2/21	
61	Associative Containers	12/2/21	
62	Algorithms, Iterators	12/2/21	
63	Vectors, Lists, Maps	14/2/21	
64	Tutorial	14/2/21	

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

TENTATIVE LESSON PLAN: R1921055
OBJECT ORIENTED PROGRAMMING THROUGH C++

Course Title: Object Oriented Programming through C++ (R1921055)		
Section : Sec B	Date : 15/08/2020	Page No : 01 of 03
Revision No : 00	Prepared By : M Naresh Babu	Approved By : HOD

Tools: Black board, PPTs, Moodle

No. of Periods	TOPIC	Date	Mode of Delivery
Unit-1 Introduction to C++ **CO1: Describe the procedural and object oriented paradigm with concepts of streams, classes, functions, data and objects** **TB:" Programming in C++, Ashok N Kamthane, Pearson 2nd Edition**			
1	Introduction to C++: Difference between C and C++	17/8/20	Lecture interspersed with discussions
2	Evolution of C++	18/8/20	
3	The Object Oriented Technology	19/8/20	
4	Disadvantage of Conventional Programming	21/8/20	
5	Key Concepts of Object Oriented Programming	25/8/20 26/8/20	
6	Advantage of OOP	28/8/20	
7	Object Oriented Language	29/8/20 31/8/20	
8	Tutorial	1/9/20	
UNIT-II: Classes and Objects &Constructors and Destructor **CO2: Understand dynamic memory management techniques using pointers, constructors, destructors** **TB:" Programming in C++, Ashok N Kamthane, Pearson 2nd Edition "**			
9	Classes and Objects &Constructors and Destructor: Classes in C++	2/9/20	Lecture interspersed with discussions
10	Declaring Objects	7/9/20	
11	Access Specifiers and their Scope	8/9/20	
12	Defining Member Function	9/9/20	
13	Overloading Member Function	11/9/20 23/9/20	
14	Nested class, Constructors and Destructors	13/10/20 14/10/20	
15	Introduction, Constructors and Destructor	15/10/20	

		17/10/20	
16	Characteristics of Constructor and Destructor	19/10/20	
17	Application with Constructor	19/10/20	
18	Constructor with Arguments parameterized Constructor	20/10/20	
19	Destructors	20/10/20	
20	Anonymous Objects.	21/10/20	
21	Tutorial	21/10/20	
No. of Periods	**TOPIC**	**Date**	**Mode of Delivery**
UNIT-III: Operator Overloading and Type Conversion & Inheritance **CO3: Describe the concept of function overloading, operator overloading, virtual functions and polymorphism** **TB:" Programming in C++, Ashok N Kamthane, Pearson 2nd Edition "**			
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23	Overloading Unary Operator	23/10/20	
24	Operator Return Type	23/10/20	
25	Overloading Assignment Operator (=)	26/10/20	
26	Rules for Overloading Operators	27/10/20	
27	Inheritance, Reusability	28/10/20	
28	Types of Inheritance	29/10/20	
29	Virtual Base ClassesObject as a Class Member	31/10/20	
30	Abstract Classes	2/11/20	
31	Advantages of Inheritance	3/11/20	
32	Disadvantages of Inheritance	4/11/20	
33	Tutorial	29/12/20	
UNIT-IV: Pointers & Binding Polymorphisms and Virtual Functions **CO4: Classify inheritance with the understanding of early and late binding, usage of exception handling, generic programming** **TB:" Programming in C++, Ashok N Kamthane, Pearson 2nd Edition "**			
No. of Periods	**TOPIC**	**Date**	**Mode of Delivery**
34	Pointers & Binding Polymorphisms and Virtual Functions: Pointer	30/12/20	
35	Features of Pointers	31/12/20	
36	Pointer Declaration	18/1/21	
37	Pointer to Class	19/1/21	

38	Pointer Object	19/1/21	Lecture interspersed with discussions
39	The this Pointer	21/1/21	
40	Pointer to Derived Classes and Base Class	21/1/21	
41	Binding Polymorphisms and Virtual Functions	22/1/21	
42	Introduction, Binding in C++	23/1/21	
43	Virtual Functions	23/1/21	
44	Rules for Virtual Function	25/1/21	
45	Virtual Destructor	25/1/21	
46	Tutorial	27/1/21	
UNIT-V: Generic Programming with Templates & Exception Handling **CO5: Demonstrate an understanding of simple Entity-Relationship models for databases** **TB:" Fundamentals of Data Structures in C++, S.Sahni, University Press (India) Pvt.Ltd, 2nd edition, Universities Press, Pvt. Ltd. "**			
47	Generic Programming with Templates & Exception Handling: Definition of class Templates	28/1/21	Lecture interspersed with discussions
48	Normal Function Templates	29/1/1	
49	Over Loading of Template Function	29/1/21	
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51	Difference between Templates and Macros	1/2/21	
52	Linked Lists with Templates	2/2/21	
53	Exception Handling	3/2/21	
54	Principles of Exception Handling	4/2/21	
55	The Keywords try throw and catch	5/2/21	
56	Multiple Catch Statements	6/2/21	
57	Specifying Exceptions	8/2/21	
58	Overview of Standard Template Library	9/2/21	
59	STL Programming Model	10/2/21	
60	Containers, Sequence Containers	11/2/21	
61	Associative Containers	12/2/21	
62	Algorithms, Iterators	12/2/21	
63	Vectors, Lists, Maps	14/2/21	
64	Tutorial	14/2/21	

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TENTATIVE LESSON PLAN: R1921056

Course Title : COMPUTER ORGANIZATION		
Section : Sec A	**Date : 15-08-2020**	
Revision No : 00	**Prepared By : A. KALYAN KUMAR**	**Approved By : HOD**

Tools: MS TEAMS, PPTs

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-1: BASIC STRUCTURE OF COMPUTERS, DATA REPRESENTATION, COMPUTER ARITHMETIC **CO-1:** Develop a detailed understanding of computer systems. **Text Book:** Computer System Architecture, M. Morris Mano, Third Edition, Pearson, 2008.			
1.	Basic Organization Of Computers	17-08-2020 TO 29-08-2020	Online Classes With Ms Teams
2.	Historical Perspective		
3.	Bus Structures		
4.	Data Types		
5.	Complements		
6.	Fixed Point Representation		
7.	Floating Point Representation		
8.	Other Binary Codes		
9.	Error Detection Codes		
10.	Addition And Subtration		
11.	Multiplication Algorithms		
12.	Division Algorithms		
UNIT-2: REGISTER TRANSFER LANGUAGE AND MICRO OPERATIONS, BASIC COMPUTER ORGANIZATION AND DESIGN **CO-2:** Cite different number systems, binary addition and subtraction, standard, floating-point, and micro operations **Text Book:** Computer System Architecture, M. Morris Mano, Third Edition, Pearson, 2008.			
13.	Register Transfer Language	31-08-2020 TO 14-09-2020	Online Classes With Ms Teams
14.	Register Tranfer Bus And Memory Transfers		
15.	Arithmetic Micro Operations		
16.	Logic Micro Operations		
17.	Shift Micro Operations		
18.	Arithmetic Logic Shift Unit		
19.	Instruction Codes		
20.	Computer Registers		
21.	Computer Instructions		
22.	Instruction Cycle		
23.	Memory – Referance Instructions		
24.	Input – Output And Interrupt		
25.	Complete Computer Description		
UNIT –3: CENTRAL PROCESSING UNIT, MICRO PROGRAMMED CONTROL **CO3:** Develop a detailed understanding of architecture and functionality of central processing unit **Text Book:** Computer System Architecture, M. Morris Mano, Third Edition, Pearson, 2008.			

26.	General Register Organization	15-09-2020 TO 30-09-2020	Online Classes With Ms Teams
27.	Stack Organization		
28.	Instruction Formats		
29.	Addressing Modes		
30.	Data Transfer And Manipulation		
31.	Program Control		
32.	Reduced Instruction Set Computer		
33.	Control Memory		
34.	Address Sequencing		
35.	Micro Program Example		
36.	Design Of Control Unit		

UNIT – 4: MEMORY ORGANIZATION, INPUT / OUTPUT ORGANIZATION

CO4: Exemplify in a better way the I/O and memory organization.

Text Book: Computer System Architecture, M. Morris Mano, Third Edition, Pearson, 2008.

No. of Periods	TOPIC	DATE	Mode of Delivery
37.	Memory Hierarchy	01-10-2020 TO 20-10-2020	Online Classes With Ms Teams
38.	Main Memory		
39.	Auxilary Memory		
40.	Associative Memory		
41.	Catche Memory		
42.	Virtual Memory		
43.	Peripheral Devices		
44.	Input – Output Interface		
45.	Asynchronous Data Transfer		
46.	Modes Of Transfer		
47.	Priority Interrupts		
48.	Direct Memory Access		

UNIT – 5: MULTIPROCESSORS, PIPE LINES

CO5: Illustrate concepts of parallel processing, pipelining and inter processor communication

Text Book: Computer System Architecture, M. Morris Mano, Third Edition, Pearson, 2008.

49.	Introduction	21-10-2020 TO 20-11-2020	Online Classes With Ms Teams
50.	Characteristics Of Multi Processors		
51.	Inter Connection Structures		
52.	Inter Processor Arbitration		
53.	Parallel Processing		
54.	Pipelining, Instruction Pipe Line, RISC Pipe Line		
55.	Array Processor		

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TENTATIVE LESSON PLAN: R1921056

Course Title : COMPUTER ORGANIZATION		
Section : Sec B	**Date : 15-08-2020**	
Revision No : 00	**Prepared By : A. KALYAN KUMAR**	**Approved By : HOD**

Tools: MS TEAMS, PPTs

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-1: BASIC STRUCTURE OF COMPUTERS, DATA REPRESENTATION, COMPUTER ARITHMETIC **CO-1:** Develop a detailed understanding of computer systems. **Text Book:** Computer System Architecture, M. Morris Mano, Third Edition, Pearson, 2008.			
1.	Basic Organization Of Computers	17-08-2020 TO 29-08-2020	Online Classes With Ms Teams
2.	Historical Perspective		
3.	Bus Structures		
4.	Data Types		
5.	Complements		
6.	Fixed Point Representation		
7.	Floating Point Representation		
8.	Other Binary Codes		
9.	Error Detection Codes		
10.	Addition And Subtration		
11.	Multiplication Algorithms		
12.	Division Algorithms		
UNIT-2: REGISTER TRANSFER LANGUAGE AND MICRO OPERATIONS, BASIC COMPUTER ORGANIZATION AND DESIGN **CO-2:** Cite different number systems, binary addition and subtraction, standard, floating-point, and micro operations **Text Book:** Computer System Architecture, M. Morris Mano, Third Edition, Pearson, 2008.			
13.	Register Transfer Language	31-08-2020 TO 14-09-2020	Online Classes With Ms Teams
14.	Register Tranfer Bus And Memory Transfers		
15.	Arithmetic Micro Operations		
16.	Logic Micro Operations		
17.	Shift Micro Operations		
18.	Arithmetic Logic Shift Unit		
19.	Instruction Codes		
20.	Computer Registers		
21.	Computer Instructions		
22.	Instruction Cycle		
23.	Memory – Referance Instructions		
24.	Input – Output And Interrupt		
25.	Complete Computer Description		
UNIT –3: CENTRAL PROCESSING UNIT, MICRO PROGRAMMED CONTROL **CO3:** Develop a detailed understanding of architecture and functionality of central processing unit **Text Book:** Computer System Architecture, M. Morris Mano, Third Edition, Pearson, 2008.			

26.	General Register Organization	15-09-2020 TO 30-09-2020	Online Classes With Ms Teams
27.	Stack Organization		
28.	Instruction Formats		
29.	Addressing Modes		
30.	Data Transfer And Manipulation		
31.	Program Control		
32.	Reduced Instruction Set Computer		
33.	Control Memory		
34.	Address Sequencing		
35.	Micro Program Example		
36.	Design Of Control Unit		

UNIT – 4: MEMORY ORGANIZATION, INPUT / OUTPUT ORGANIZATION

CO4: Exemplify in a better way the I/O and memory organization.

Text Book: Computer System Architecture, M. Morris Mano, Third Edition, Pearson, 2008.

No. of Periods	TOPIC	DATE	Mode of Delivery
37.	Memory Hierarchy	01-10-2020 TO 20-10-2020	Online Classes With Ms Teams
38.	Main Memory		
39.	Auxilary Memory		
40.	Associative Memory		
41.	Catche Memory		
42.	Virtual Memory		
43.	Peripheral Devices		
44.	Input – Output Interface		
45.	Asynchronous Data Transfer		
46.	Modes Of Transfer		
47.	Priority Interrupts		
48.	Direct Memory Access		

UNIT – 5: MULTIPROCESSORS, PIPE LINES

CO5: Illustrate concepts of parallel processing, pipelining and inter processor communication

Text Book: Computer System Architecture, M. Morris Mano, Third Edition, Pearson, 2008.

49.	Introduction	21-10-2020 TO 20-11-2020	Online Classes With Ms Teams
50.	Characteristics Of Multi Processors		
51.	Inter Connection Structures		
52.	Inter Processor Arbitration		
53.	Parallel Processing		
54.	Pipelining, Instruction Pipe Line, RISC Pipe Line		
55.	Array Processor		

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

TENTATIVE LESSON PLAN: R1631051

COMPILER DESIGN

Course Title: COMPILER DESIGN		
Section:SecA & B	Date: 15/08/2020	Page No: 01 of 04
Revision No: 00	Prepared By: Dr.B.Ashalatha	Approved By: HOD

Tools: Black Board, PPTs

No. of Periods	Topic	Date	Mode of Delivery
Unit-1 Introduction **CO1: To acquire knowledge in different phases and passes of Compiler, and specifying different types of tokens by lexical analyzer, and also able to use the Compiler tools like LEX, YACC, etc** **TB:" Compilers, Principles Techniques and Tools.Alfred V Aho, Monical S. Lam, Ravi Sethi Jeffery D. Ullman,2nd edition,pearson,2007. "**			
1	Language Processing	17/8/20	**Lecture interspersed with discussions**
2	Structure of a compiler-	18/8/20	
3	the evaluation of Programming language,	19/8/20	
4	the evaluation of Programming language,	21/8/20	
5	The Science of building a Compiler	25/8/20 26/8/20	
6	application of Compiler Technology	28/8/20	
7	Programming Language Basics	29/8/20 31/8/20	
8	Programming Language Basics	1/9/20	
9	Lexical Analysis	2/9/20	
10	The role of lexical analysis buffing	7/9/20	
11	specification of tokens	8/9/20	
12	Recognitions of tokens	9/9/20	
13	the lexical analyzer generator	11/9/20	

14	the lexical analyzer generator	23/9/20	
15	**Tutorial**	13/10/20	
UNIT-II: Syntax Analysis **CO2: To be familiar with the concepts Parsing Syntax Analysis.** **TB:" Compilers, Principles Techniques and Tools.Alfred V Aho, Monical S. Lam, Ravi Sethi Jeffery D. Ullman,2nd edition,pearson,2007. "**			
1	The Role of a parser	14/10/20	**Lecture interspersed with discussions**
2	The Role of a parser	15/10/20	
3	Context free Grammars	17/10/20	
4	Writing A grammar	19/10/20	
5	top down parsing	20/10/20	
6	Evaluation of Expressions- Expression	20/10/20	
7	bottom up parsing	21/10/20	
8	Introduction to Lr Parser	21/10/20	
9	**Tutorial**	22/10/20	
UNIT-III: More Powerful LR parser **CO3: To be familiar with Parser and its types i.e. Top-down and Bottom-up parsers** **TB:" Compilers, Principles Techniques and Tools.Alfred V Aho, Monical S. Lam, Ravi SethiJeffery D. Ullman,2nd edition,pearson,2007. "**			
1	Introducuction to LR PArsers	23/10/20	**Lecture interspersed**
2	SLR	23/10/20	
3	SLR	26/10/20	
4	CLR	27/10/20	
5	CLR	28/10/20	
6	LALR	29/10/20	
7	(LR1, LALR) Using Armigers Grammars	31/10/20	
8	Error Recovery in LR Parsers	2/11/20	
9	Error Recovery in LR Parsers	3/11/20	
10	Syntax Directed Transactions Definition	4/11/20	

11	Syntax Directed Transactions Definition	29/12/20	with discussions
12	Evolution order of SDTS	30/12/20	
13	Evolution order of SDTS	31/12/20	
14	Evolution order of SDTS	18/1/21	
15	Application of SDTS	19/1/21	
16	Application of SDTS	19/1/21	
17	Syntax Directed Translation Schemes	21/1/21	
18	Syntax Directed Translation Schemes	21/1/21	
19	Sparse Matrix Input	22/1/21	
20	Problems	23/1/21	
21	Problems	23/1/21	
22	Problems	25/1/21	
23	Problems	25/1/21	
24	Problems	27/1/21	
25	**Tutorial**	27/1/21	
UNIT-IV: Intermediated Code **CO4: Be familiar with Construction of LL, SLR, CLR and LALR parse table.** **TB:" Compilers, Principles Techniques and Tools.Alfred V Aho, Monical S. Lam, Ravi SethiJeffery D. Ullman,2nd edition,pearson,2007. "**			
1	Generation Variants of Syntax trees	28/1/21	Lecture interspersed with discussions
2	3 Address code	28/1/21	
3	Types and Deceleration,	29/1/21	
4	Translation of Expressions	29/1/21	
5	Type Checking	29/1/21	
6	Control Flow	30/1/21	
7	Back patching	30/1/21	
8	**Tutorial**	30/1/21	
UNIT-V: Runtime Environments **CO5: Be familiar with Syntax directed translation, synthesized and inherited attributes** **TB:" Compilers, Principles Techniques and Tools.Alfred V Aho, Monical S.**			

Lam, Ravi SethiJeffery D. Ullman,2nd edition,pearson,2007. "			
1	Stack allocation of space	1/2/21	
2	access to Non Local data, Stack Management, Heap Managemen	1/2/21	
3	code generation, Issues in design of code generation, target Language	2/2/21	
4	Basic blocks,Flow Graphs,Simple code generation	2/2/21	
5	**Tutorial**	2/2/21	
UNIT-VI: Machine Independent Optimization **CO6: Be familiar with Techniques for code optimization.** **TB:" Compilers, Principles Techniques and Tools.Alfred V Aho, Monical S. Lam, Ravi SethiJeffery D. Ullman,2nd edition,pearson,2007. "**			
1	The principle sources of Optimization	4/2/21	**Lecture interspersed with discussions**
2	The principle sources of Optimization	5/2/21	
3	peep hole Optimization	6/2/21	
4	peep hole Optimization	8/2/21	
5	Introduction to Date flow Analysis	9/2/21	
6	Introduction to Date flow Analysis	10/2/21	
7	**Tutorial**	11/2/21	

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

TENTATIVE LESSON PLAN

UNIX AND SHELL PROGRAMMING-R1631052

Course Title: UNIX AND SHELL PROGRAMMING		
Year /Sem : III/I CSE A	Date : 2/11/20	AY: 2020-21
Revision No :	Prepared By : K.SRILAKSHMI Assistant Professor	Approved By : HOD

Tools: Black Board , PPT , Video Lectures , MS Teams

UNIT-I Introduction to unix
CO1: Identify the basic Unix general purpose commands.
TB: The Unix programming Environment by Brain W. Kernighan & Rob Pike, Pearson.

No.of Periods	Topic	Date	Mode of delivry
1	Introduction to unix-Brief History	From: 2/11/20 to 18/11/20	Online class with MS teams
2	What is Unix		
3	Unix Components		
4	Using Unix		
5	Commands in Unix		
6,7	Basic commands		
8,9	Command Substitution		
10	Giving Multiple Commands		
11	**Tutorial**		

UNIT-II: The File system
CO2: Apply and change the ownership and file permissions using advance Unix commands
TB: The Unix programming Environment by Brain W. Kernighan & Rob Pike, Pearson.

12	The File System-The Basics of Files	From:19/11/20 to 30/11/20	Online class with MS teams
13	What's in a File		
14	Directories and File Names		
15	Permissions		
16	INodes		
17	The Directory Hierarchy		
18,19	File Attributes and Permissions		
20	The File Command knowing the File Type		
21	The Chmod Command Changing File		
22	The Chown Command Changing the Owner of a		
23	The Chgrp Command Changing the Group of a		
24	**Tutorial**		

UNIT-III: Shell-Command Line Structure **CO3:** Use the awk, grep, perl scripts. **TB:** The Unix programming Environment by Brain W. Kernighan & Rob Pike, Pearson.			
25	Using the Shell-Command Line Structure	From: 1/12/20 to 12/12/20	Online class with MS teams
26,27	MetaCharacters		
28	Creating New Commands		
29	Command Arguments and Parameters		
30,31	Program Output as Arguments		
32	Shell Variables		
33	More on I/O Redirection		
34	Looping in Shell Programs		
35	**Tutorial**		
UNIT-IV:. Filters **CO4:** Implement shell scripts and sed **TB:** The Unix programming Environment by Brain W. Kernighan & Rob Pike, Pearson.			
36,37	Filters-The Grep Family	From: 14/12/20 to 11/1/21	Online class with MS teams
38	Other Filters		
39	The Stream Editor Sed		
40	The AWK Pattern Scanning and processing Language		
41	Good Files and Good Filters		
42	**Tutorial**		
UNIT-V: Shell Programming **CO5:** Apply basic of administrative task. **TB:**. The Unix programming Environment by Brain W. Kernighan & Rob Pike, Pearson.			
43	Shell Prgramming-Shell Variables	From:26/12/20 to 11/1/21	Online class with MS teams
44	The Export Command		
45	The Profile File a Script Run During Starting		
46	The First Shell Script, The read Command		
47	Positional parameters		
48	The $? Variable knowing the exit status		
49	More about the Set Command, The Exit		
50	Branching Control Structures & Loop Control		
51	The Continue and Break Statement		
52	The Expr Command:Performing Integer		
53	Real Arithmetic in Shell Programs		
54	The here Document(<<)Sleep Command		
55	Debugging Scripts		
56	The Script, Eval, Exec Command		
57	**Tutorial**		
UNIT-VI: The Process **CO6:** Apply networking Unix commands **TB:** The Unix programming Environment by Brain W. Kernighan & Rob Pike, Pearson.			
58	The Process-The Meaning	From:12/1/21 to 6/2/21	Online class with MS teams
59	Parent and Child Processes		
60	Types of Processes		
61	More about Foreground and Background		

62	Internal and External Commands		
63	Process Creation		
64	The Trap Command		
65	The Stty Command		
66	The Kill Command		
67	Job Control		
68	**Tutorial**		

2/11/20

Faculty/ Date

HOD/Date 02/11/20.

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Department of Computer Science and Engineering

TENTATIVE LESSON PLAN

UNIX AND SHELL PROGRAMMING-R1631052

Course Title: UNIX AND SHELL PROGRAMMING		
Year /Sem : III/I CSE B	Date : 2/11/20	AY: 2020-21
Revision No :	Prepared By : K.SRILAKSHMI Assistant Professor	Approved By : HOD

Tools: Black Board , PPT , Video Lectures , MS Teams

UNIT-I Introduction to unix
CO1: Identify the basic Unix general purpose commands.
TB: The Unix programming Environment by Brain W. Kernighan & Rob Pike, Pearson.

No. of	Topic	Date	Mode of delivry
1	Introduction to unix-Brief History	From: 2/11/20 to 18/11/20	Online class with MS teams
2	What is Unix		
3	Unix Components		
4	Using Unix		
5	Commands in Unix		
6,7	Basic commands		
8,9	Command Substitution		
10	Giving Multiple Commands		
11	**Tutorial**		

UNIT-II: The File system
CO2: Apply and change the ownership and file permissions using advance Unix commands
TB: The Unix programming Environment by Brain W. Kernighan & Rob Pike, Pearson.

12	The File System-The Basics of Files	From:19/11/20 to 30/11/20	Online class with MS teams
13	What's in a File		
14	Directories and File Names		
15	Permissions		
16	INodes		
17	The Directory Hierarchy		
18,	File Attributes and Permissions		
20	The File Command knowing the File Type		
21	The Chmod Command Changing File		
22	The Chown Command Changing the Owner of a		
23	The Chgrp Command Changing the Group of a		
24	**Tutorial**		

UNIT-III: Shell-Command Line Structure **CO3:** Use the awk, grep, perl scripts. **TB:** The Unix programming Environment by Brain W. Kernighan & Rob Pike, Pearson.			
25	Using the Shell-Command Line Structure	From: 1/12/20 to 12/12/20	Online class with MS teams
26,	MetaCharacters		
28	Creating New Commands		
29	Command Arguments and Parameters		
30,	Program Output as Arguments		
32	Shell Variables		
33	More on I/O Redirection		
34	Looping in Shell Programs		
35	**Tutorial**		
UNIT-IV:. Filters **CO4:** Implement shell scripts and sed **TB:** The Unix programming Environment by Brain W. Kernighan & Rob Pike, Pearson.			
36,	Filters-The Grep Family	From: 14/12/20 to 11/1/21	Online class with MS teams
38	Other Filters		
39	The Stream Editor Sed		
40	The AWK Pattern Scanning and processing Language		
41	Good Files and Good Filters		
42	**Tutorial**		
UNIT-V: Shell Programming **CO5:** Apply basic of administrative task. **TB:**. The Unix programming Environment by Brain W. Kernighan & Rob Pike, Pearson.			
43	Shell Prgramming-Shell Variables	From:26/12/20 to 11/1/21	Online class with MS teams
44	The Export Command		
45	The Profile File a Script Run During Starting		
46	The First Shell Script, The read Command		
47	Positional parameters		
48	The $? Variable knowing the exit status		
49	More about the Set Command, The Exit		
50	Branching Control Structures & Loop Control		
51	The Continue and Break Statement		
52	The Expr Command:Performing Integer		
53	Real Arithmetic in Shell Programs		
54	The here Document(<<)Sleep Command		
55	Debugging Scripts		
56	The Script, Eval, Exec Command		
57	**Tutorial**		
UNIT-VI: The Process **CO6:** Apply networking Unix commands **TB:** The Unix programming Environment by Brain W. Kernighan & Rob Pike, Pearson.			
58	The Process-The Meaning	From:12/1/21 to 6/2/21	Online class with MS teams
59	Parent and Child Processes		
60	Types of Processes		
61	More about Foreground and Background		

62	Internal and External Commands		
63	Process Creation		
64	The Trap Command		
65	The Stty Command		
66	The Kill Command		
67	Job Control		
68	**Tutorial**		

2/11/20

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HOD/Date 2/11/2020

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TENTATIVE LESSON PLAN: R1631053

Course Title : OBJECT ORIENTED ANALYSIS & DESIGN USING UML		
Section: Sec A & B	Date : 10-6-2019	Page No : 01 of 03
Revision No : 00	Prepared By : D.V.V.Brahmachari	Approved By : HOD

Tools: Black board, PPTs

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT –I	**INTRODUCTION TO SYSTEMS** **CO1:: Will be able to understand how to solve complex problems** **TB: Object- Oriented Analysis And Design with Applications, Grady BOOCH, Robert A. Maksimchuk, Michael W. ENGLE, Bobbi J. Young, Jim Conallen, Kellia Houston, 3rd edition, 2013, PEARSON.**		
1.	Introduction to Systems	17/8/20	Lecture interspersed with discussions
2.	The Structure of Complex systems	18/8/20	
3.	The Inherent Complexity of Software	19/8/20	
4.	Attributes of Complex System	21/8/20	
5.	Organized and Disorganized Complexity	25/8/20 26/8/20	
6.	Bringing Order to Chaos	28/8/20	
7.	Designing Complex Systems	29/8/20 31/8/20	
8.	Evolution of Object Model	1/9/20	
9.	Foundation of Object Model	2/9/20	
10.	Elements of Object Model	7/9/20	
11.	Applying the Object Model	8/9/20 To 11/9/20	
12.	**Tutorial**	13/10/20	
UNIT –II	**CLASSES AND OBJECTS** **CO2:: Will be able to Able to Represent classes, responsibilities and states using UML Notation.** **TB: Object- Oriented Analysis And Design with Applications, Grady BOOCH, Robert A. Maksimchuk, Michael W. ENGLE, Bobbi J. Young, Jim Conallen, Kellia Houston, 3rd edition, 2013, PEARSON.**		
13.	Classes and Objects	14/10/20	
14.	Nature of object	15/10/20	Lecture
15.	Relationships among objects	17/10/20	
16.	Nature of a Class	19/10/20	
17.	Relationship among Classes	20/10/20	
18.	Interplay of Classes and Objects	20/10/20	
19.	Importance of Proper Classification	21/10/20	

20.	Key abstractions and Mechanisms	21/10/20	interspersed with discussions
21.	**Tutorial**	22/10/20	

UNIT – III INTRODUCTION TO UML
CO3:: Gain the knowledge of classes and responsibilities of the problem domain.
TB: "The Unified Modeling Language User Guide", Grady Booch, James Rumbaugh, Ivar Jacobson, 12th Impression, 2012, PEARSON.

22.	Introduction to UML	23/10/20	Lecture interspersed with discussions
23.	Why we model	23/10/20	
24.	Conceptual model of UML	26/10/20	
25.	Architecture	27/10/20	
26.	Classes	28/10/20	
27.	Relationships	29/10/20	
28.	Common Mechanisms	31/10/204/ 11/20	
29.	Class diagrams	29/12/20	
30.	Object diagrams	30/12/21	
31.	**Tutorial**	2/1/21	

UNIT –IV BASIC BEHAVIORAL MODELING
CO4:: Gain the knowledge of Behavioral Modeling
TB:: "The Unified Modeling Language User Guide", Grady Booch, James Rumbaugh, Ivar Jacobson, 12th Impression, 2012, PEARSON.

32.	Basic Behavioral Modeling	4/1/21	Lecture interspersed with discussions
33.	Interactions	5/1/21	
34.	Interaction diagrams	6/1/21	
35.	Interaction diagrams Analysis	7/1/21	
36.	Use cases	8/1/21	
37.	Use case Analysis	9/1/21	
38.	Use case Diagrams	18/1/21	
39.	Activity Diagrams	19/1/21	
40.	**Tutorial**	19/1/21	

UNIT – V ADVANCED BEHAVIORAL MODELING
CO5 :: Obtain the knowledge of Advanced Behavioral Modeling
TB:: "The Unified Modeling Language User Guide", Grady Booch, James Rumbaugh, Ivar Jacobson, 12th Impression, 2012, PEARSON.

No. of	TOPIC	DATE	Mode of

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Periods			Delivery
41.	Advanced Behavioral Modeling	21/1/21	Lecture interspersed with discussions
42.	Events and signals	22/1/21	
43.	State machines	23/1/21	
44.	Processes and Threads	25/1/21	
45.	Time and space	27/1/21	
46.	State chart diagrams	29/1/21	
47.	**Tutorial**	1/2/21	
UNIT - VI ARCHITECTURAL MODELING **CO6 : Gain the knowledge of Architectural Modeling** **TB:: "The Unified Modeling Language User Guide", Grady Booch, James Rumbaugh, Ivar Jacobson, 12th Impression, 2012, PEARSON.**			
48.	Component	4/2/21	Lecture interspersed with discussions
49.	Deployment	5/2/21	
50.	Component diagrams	6/2/21	
51.	Deployment diagrams	8/2/21	
52.	Case Study: The Unified Library application	9/2/21	
53.	**Tutorial**	10/2/21	

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TENTATIVE LESSION PLAN: R1631054
DATABASE MANAGEMENT SYSTEMS

Course Title: DATABASE MANAGEMENT SYSTEMS		
Section : Sec A & B	Date : 20/9/2020	Page No : 01 of 04
Revision No : 00	Prepared By : N SUDHAKAR REDDY	Approved By : HOD

Tools : MS TEAMS, PPTs

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT –I: Introduction **CO1: This course aims to define a Database Management System and gives a description of the Database Management structure and understand the applications of Databases** **TB:** **1. Introduction to Database Systems, CJ Date, Pearson** **2. Data base Management Systems, Raghurama Krishnan, Johannes Gehrke, TATA McGraw Hill 3rd Edition**			
1.	What is Database System? What is Database-Why Database	5/10/20	Online Classes With Microsoft Teams
2.	Data Independence	6/10/20	
3.	Relation Systems and Others- Summary	7/10/20	
4.	Database system architecture, Introduction	8/10/20	
5.	The Three Levels of Architecture	9/10/20	
6.	Tutorial class	17/10/20	
7.	The External Level- the Conceptual Level	12/10/20	
8.	The Internal Level- Mapping	13/10/20	
9.	the Database Administrator	14/10/20	
10.	The Database Management Systems	14/10/20	
11.	Client/Server Architecture.	16/10/20	
12.	Tutorial class	17/10/20	
UNIT –II : DATA BASE DESIGN **CO1: This course aims to define a Database Management System and gives a description of the Database Management structure and understand the applications of Databases** **TB: Data base Management Systems, Raghurama Krishnan, Johannes Gehrke, TATA McGraw Hill 3rd Edition**			
13.	The Relational Model	19/10/20	

14.	Relational Calculus	20/10/20	Online Classes With Microsoft Teams
15.	The E/R Models	26/10/20	
16.	ER Diagrams-Entities Attributes	27/10/20	
17.	Entity Sets-Relationship	28/10/20	
18.	Tutorial class	29/10/20	
19.	Relationship Sets-Conceptual Design With the Er Models	30/10/20	
20.	The Relational Model Integrity Constraints Over Relations	31/10/20	
21.	Relational Algebra	1/12/20	
22.	Tuple Relational Calculus	1/12/20	
23.	Domain Relational Calculus	1/12/20	
24.	Tutorial class	2/12/20	

UNIT – III: The Structured Query Language (SQL)

CO2: It provides comprehensive idea about know the advantages and disadvantages of the different models and compares relational model with the Structured Query Language (SQL)

TB: Data base Management Systems, Raghurama Krishnan, Johannes Gehrke, TATA McGraw Hill 3rd Edition

25.	The Form of Basic SQL Query	3/12/20	Online Classes With Microsoft Teams
26.	Union	4/12/20	
27.	Intersect	5/12/20	
28.	Except	7/12/20	
29.	Nested Queries	8/12/20	
30.	Correlated Nested Queries	8/12/20	
31.	Tutorial class	9/12/20	
32.	Aggregate Operators	10/12/20	
33.	Null Values	12/12/20	
34.	Complex Integrity Constraints in SQL	14/12/20	
35.	Triggers and Active Database	15/12/20	
36.	Tutorial class	16/12/20	

UNIT – IV: NORMALIZATION

CO3: It gives knowledge about the constraints and controversies associated with relational database model and the rules guiding transaction ACID.

TB:
1.Data base Management Systems, Raghurama Krishnan, Johannes Gehrke, TATA McGraw Hill 3rd Edition.
2.Fundamentals of Database Systems, Elmasri Navrate Pearson Education.

37.	Purpose of Normalization or schema refinement	17/12/20	Online Classes With Microsoft Teams
38.	Functional dependencies	18/12/20	
39.	Normal forms: 1NF, 2NF	19/12/20	
40.	3NF, surrogate key	21/12/20	
41.	Boyce-codd normal form(BCNF)	22/12/20	
42.	Tutorial class	23/12/20	
43.	Lossless join and dependency preserving decomposition	26/12/20	
44.	Fourth normal form(4NF)	28/12/20	
45.	Join dependency, 5NF	29/12/20	
46.	Tutorial class	31/12/20	

UNIT – V: TRANSACTIONS

CO4: It introduces the concepts of understand the concept of data planning and Database design and identifies the various functions of Database Administrator.

TB: Data base Management Systems, Raghurama Krishnan, Johannes Gehrke, TATA McGraw Hill 3rd Edition

47.	Transaction, properties of transactions	2/1/21	Online Classes With Microsoft Teams
48.	logs, transaction management with SQL using commit,rollback	4/1/21	
49.	Concurrency control for lost updates, uncommitted data	5/1/21	
50.	Inconsistent retrievals and the Scheduler	6/1/21	
51.	Tutorial class	7/1/21	
52.	Concurrency control with locking methods	8/1/21	
53.	Concurrency control with time stamp ordering	9/1/21	
54.	Database Recovery management	11/1/21	
55.	Tutorial class	18/1/21	

UNIT – VI: STORAGE AND INDEXING

CO4: It introduces the concepts of understand the concept of data planning and Database design and identifies the various functions of Database Administrator.

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TB: Data base Management Systems, Raghurama Krishnan, Johannes Gehrke, TATA McGraw Hill 3rd Edition			
56.	Overview of Storages and Indexing	23/1/21	Online Classes With Microsoft Teams
57.	Data on External Storage-	25/1/21	
58.	File Organization and Indexing	25/1/21	
59.	Clustered Indexing	2/2/21	
60.	Primary and Secondary Indexes	2/2/21	
61.	Tutorial class	2/2/21	
62.	Index Data Structures	4/2/21	
63.	Hash-Based Indexing	5/2/21	
64.	Tree-Based Indexing	6/2/21	
65.	Comparison of File Organization	8/2/21	
66.	Tutorial class	9/2/21	

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TENTATIVE LESSON PLAN: R1631055

Course Title : OPERATING SYSTEMS		
Section: A & B	Date : 17-08-2020	Page No : 01 of 03
Revision No : 00	Prepared By :Ms P.USHA SRI	Approved By : HOD

Tools: Black board, PPTs

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT –I	**Introduction to Operating System Concept**		
	CO1::Study the basic concepts and functions of operating systems and understand the structure and functions of OS		
	TB:Operating system concepts , Abraham Silberschatz, Peter Baer Galvin and Greg Gagne 9th Edition, John Wiley and Sons Inc., 2012.		
1.	Operating System definition	17/08/20	Lecture interspersed with discussions
2.	Introduction to Operating Systems	18/08/20	
3.	Operating System Concepts	19/08/20	
4.	Operating System Services	21/08/20	
5.	Introduction to System calls	25/08/20	
6.	System call types	26/08/20	
7.	Operating system structure	28/08/20	
8.	Operating System types	29/08/20	
9.	**Tutorial**	31/08/20	
UNIT -IIPROCESS MANAGEMENT			
	CO2::Demonstrate various Process Management Concepts and CPU Scheduling algorithms and		
	TB: Operating system concepts , Abraham Silberschatz, Peter Baer Galvin and Greg Gagne 9th Edition, John Wiley and Sons Inc., 2012.		
10.	Process Concept-the process, Process state, PCB	01/09/20	Lecture interspersed with discussions
11.	Threads	02/09/20	
12.	Process Scheduling-Scheduling Queues	07/09/20	
13.	Schedulers, Context Switch	08/09/20	
14.	Operations on Processes	09/09/20	
15.	Inter process communication	11/09/20	
16.	Shared memory Systems	23/09/20	
17.	Message Passing Systems	13/10/20	
18.	Multi threaded programming models	14/10/20	
19.	Process scheduling criteria, FCFS	15/10/20	
20.	SJF, Priority algorithms	17/10/20	
21.	Round robin ,Multilevel queue scheduling	19/10/20	
22.	Multilevel Feedback queue scheduling	20/10/20	
23.	**Tutorial**	20/10/20	
UNIT –III MEMORY MANAGEMENT			
	CO3:: Illustrate Memory management Techniques and Page replacement algorithms		
	TB: Operating system concepts , Abraham Silberschatz, Peter Baer Galvin and Greg Gagne 9th Edition, John Wiley and Sons Inc., 2012.		
24.	Memory management: Introduction, Swapping	20/10/20	
25.	Contiguous Memory allocation	21/10/20	

26.	Paging, Structure of the page table	21/10/20	Lecture interspersed with discussions
27.	Virtual Memory Management: Virtual Memory	22/10/20	
28.	Demand paging	23/10/20	
29.	Performance of demand paging	23/10/20	
30.	Copy on write	26/10/20	
31.	Page Replacement Algorithms	27/10/20	
32.	FIFO Page replacement	28/10/20	
33.	Optimal Page replacement	29/10/20	
34.	LRU Page replacement	31/10/20	
35.	LRU approximation page replacement	02/11/20	
36.	Allocation of Frames	03/11/20	
37.	**Tutorial**	04/11/20	

UNIT - IV CONCURRENCY

CO2::Understand the principles of concurrency and deadlock , applying the deadlock prevention and avoidance techniques.

TB: Operating system concepts, Abraham Silberschatz, Peter Baer Galvin and Greg Gagne 9th Edition, John Wiley and Sons Inc., 2012.

No. of Periods	TOPIC	DATE	Mode of Delivery
38.	Process Synchronization	29/12/20	Lecture interspersed with discussions
39.	Critical Section problem	30/12/20	
40.	Petersons solution	31/12/20	
41.	Synchronization Hardware	18/01/21	
42.	Semaphores	19/01/21	
43.	Classic problems of synchronization The Bounded Buffer problem	19/01/21	
44.	The Readers -Writers Problem	21/01/21	
45.	The Dining Philosophers Problem	21/01/21	
46.	Monitors-Usage	22/01/21	
47.	Dining Philosophers Solution using Monitors	23/01/21	
48.	Implementing and resuming monitors using semaphores	23/01/21	
49.	Synchronization examples	25/01/21	
50.	Principles of Deadlock system model	25/01/21	
51.	Deadlock characterization	27/01/21	
52.	Methods for handling deadlocks	27/01/21	
53.	Deadlock prevention and Detection	28/01/21	
54.	Recovery from deadlock	28/01/21	
55.	**Tutorial**	29/01/21	

UNIT – File System Interface

CO3::Demonstrate File System Concepts and Mass Storage Structures

TB:Operating system concepts, Abraham Silberschatz, Peter Baer Galvin and Greg Gagne 9th Edition, John Wiley and Sons Inc., 2012.

56.	Concept of a file	30/01/21	

57.	Access methods, Directory structure	30/01/21	Lecture interspersed with discussions
58.	Acyclic graph directories	30/01/21	
59.	General graph directory	01/02/21	
60.	File system mounting	01/02/21	
61.	File sharing, Protection	02/02/21	
62.	**File system Implementation**-File System structure	02/02/21	
63.	Allocation methods-Contiguous allocation	02/02/21	
64.	Linked allocation, Indexed allocation	03/02/21	
65.	Free-Space Management	03/02/21	
66.	**Mass-storage structure**: Overview of Mass-storage structure	03/02/21	
67.	Disk structure, Disk attachment	04/02/21	
68.	Disk Scheduling	04/02/21	
69.	**Tutorial**	05/02/21	

UNIT VI–LINUX SYSTEM

CO6:: Discriminate about Android platforms and learn about the basics of Linux system and perform administrative tasks on Linux servers

TB 1:: Operating Systems – Internals and Design Principles, William Stallings, 7th Edition, Prentice Hall, 2011.

TB 2::. Operating Systems-S Halder, Alex A Aravind Pearson Education Second Edition 2016.

REFERENCES

70.	Linux Systems Overview, components of Linux	06/02/21	Lecture interspersed with discussions
71.	Inter process communication	06/02/21	
72.	Synchronization	07/02/21	
73.	Interrupt,Exception and System call	08/02/21	
74.	**Android Software platform:** Android architecture	09/02/21	
75.	Operating System services	09/02/21	
76.	Android runtime application development	10/02/21	
77.	Application Structure, Application Process management	10/02/21	
78.	**Tutorial**	11/02/21	

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TENTATIVE LESSON PLAN: R1641051

Course Title: CRYPTOGRAPHY NETWORKS SECURITY		
Section : CSE-A&B Year /Sem : IV/I	Date : 2-11-2020	AY: 2020-21
Revision No :	Prepared By :D V SUBBA RAO ,Assoociate Professor	Approved By : HOD

Tools : Black board, PPTs, Moodle

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-I Basic Principles **CO1:** **Classify various Security attacks ,Services, Mechanisms and Mathematics of Cryptography** **TEXT BOOK:** Cryptography and Network Security, Behrouz A Forouzan, Debdeep Mukhopadhyay,(3e) Mc Graw Hill.			
1	**UNIT:I** Introduction	2/11/2020	Lecture interspersed with discussions
2	Security Goals	3/11/2020	
3	Cryptographic Attacks	4/11/2020	
4	Security Services	6/11/2020	
5	Security Mechanisms	7/11/2020	
6	Techniques	9/11/2020	
7	Integer Arithmetic	10/11/20	
8,9,10	Modular Arithmetic	11/11/20	
	congruence	12/11/20	
	Operation on Z_N	13/11/20	
11,12	Matrices	23/11/20 24/11/20	
13	Linear congruence	25/11/20	
14	Tutorial class	28/11/20	
UNIT-II Symmetric Encryption **CO2:** **Relate Mathematics of Symmetric Key Cryptography and Apply the Symmetric key Cryptography like DES, AES.** **TEXT BOOK:** Cryptography and Network Security, Behrouz A Forouzan, Debdeep Mukhopadhyay,(3e) Mc Graw Hill.			
15	**UNIT:II** Mathematics of Symmetric Key Cryptography	30/11/20	Lecture interspersed with discussions
16	Algebraic Structure	1/12/20	
17	GF Fields	2/12/20	
18	Introduction to Modern Symmetric Key Ciphers	3/12/20	
19	Modern Block Ciphers	3/12/20	

No. of Periods	TOPIC	Date	Mode of Delivery
21	Introduction Data Encryption Standard	15/12/20	
22	DES Structure	16/12/20	
23	DES Analysis	17/12/20	
24	Multiple DES, Security of DES	18/12/20	
25	Advanced Encryption Standard	19/12/20	
26	Transformations	21/12/20	
27	Key Expansion	22/12/20	
28	Ciphers, Examples, Analysis of AES	23/12/20	
29	Tutorial	24/12/20	

UNIT-III: Asymmetric Encryption

CO3:

Relate Mathematics of Asymmetric Key Cryptography and Apply the Asymmetric key cryptography

TEXT BOOK:

Cryptography and Network Security, Behrouz A Forouzan, Debdeep Mukhopadhyay,(3e) Mc Graw Hill.

30	**UNIT-III** Asymmetric Encryption	26/12/20	Lecture interspersed with discussions
31,32	Mathematics of Asymmetric Key Cryptography: **PRIMES**	28/12/20 29/12/20	
33	Primality Testing	30/12/20	
34	Factorization	31/12/20	
35	Chinese Remainder Theorm	2/01/21	
36,37	Quadratic Congruence	4/01/21 5/01/21	
38,39	Asymmetric Key Cryptography	6/01/21 7/01/21	
40	Tutorial	9/01/21	

UNIT-IV Data Integrity, Digital Signature Schemes & Key Management

CO4:

Make use of Data Integrity, Digital Signature Schemes & Key Management for verifying the authenticity of digital messages

TEXT BOOK:

Cryptography and Network Security, Behrouz A Forouzan, Debdeep Mukhopadhyay,(3e) Mc Graw Hill.

41,42	**UNIT:IV** Message Integrity and Message Authentication	11/01/21 12/01/21	Lecture interspersed with discussions
43,44	Cryptographic Hash Functions	18/01/21 19/01/21	
45	Digital Signature	20/01/21	
46,47	Key Management	21/01/21 23/1/21	
48	Tutorial	25/1/21	

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-V Network Security-I **CO 5:** Select protocols like PGP,S/MIME in Application layer and SSL,TLS in Transport layer to Secure the Network during data transmission **TEXT BOOK:** Cryptography and Network Security, Behrouz A Forouzan, Debdeep Mukhopadhyay,(3e) Mc Graw Hill.			
49,50	**UNIT-V:** Network Security-I	27/1/21 28/1/21	Lecture interspersed with discussions
51,52	Security at application layer	29/1/21 30/1/21	
53	PGP	1/2/21	
54	S/MIME	2/2/21	
55	Security at the Transport Layer	3/2/21	
56,57	SSL	4/2/21 5/2/21	
58	TLS	8/2/21	
59	Tutorial	9/2/21	
UNIT-VI Network Security-II **CO6:** **Select protocols like PGP,S/MIME in Application layer and SSL,TLS in Transport layer to Secure the Network during data transmission** **TEXT BOOK:** Cryptography and Network Security, Behrouz A Forouzan, Debdeep Mukhopadhyay,(3e) Mc Graw Hill.			
60,61	**UNIT- VI**: Network Security-II	10/2/21 11/2/21	Lecture interspersed with discussions
62,63	Security at the Network Layer	12/2/21 15/2/21	
64,65	IPSec	16/2/21 17/2/21	
66,67,68	System Security	18/2/21 19/2/21 19/2/21	
69	Tutorial	20/2/21	

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TENTATIVE LESSON PLAN: RT41052

SOFTWARE ARCHITECTURE AND DESIGN PATTERNS

Course Title: SOFTWARE ARCHITECTURE AND DESIGN PATTERNS		
Section: A	Date:01-11-20	Page No: 01 of 04
Revision No: 00	Prepared By:Dr. A. RADHIKA	Approved By: HOD

Tools: MS Teams, Black Board, PPTs

No. of Periods	Topic	Date	Mode of Delivery
Unit-1 :Envisioning Architecture **CO1: Able to analyze the architecture and build the system from the component.** **TB:" Software Architecture in Practice, second edition, Len Bass, Paul Clements & Rick Kazman, Pearson Education, 2003 "**			
1	**Envisioning Architecture**	**From: 02/11/2020 To 18/11/2020**	**Online Class with MS Teams**
2	The Architecture Business Cycle		
3	What is Software Architecture		
4	Architectural patterns		
5	Reference models		
6	Reference architectures		
7	Architectural structures and views		
8	Creating and Architecture		
9	Quality Attributes		
10	Achieving qualities		
11	Architectural styles and patterns		
12	Designing the Architecture		
13	Documenting software architectures		
14	Reconstructing Software Architecture.		
UNIT-II: Analyzing Architectures **CO2: Understand the architecture, creating it and moving from one to any, different structural patterns.** **TB:" Software Architecture in Practice, second edition, Len Bass, Paul Clements & Rick Kazman, Pearson Education, 2003 "**			
1	Analyzing Architectures	**From: 19/11/2020 To 30/11/2020**	**Online Class with MS Teams**
2	Architecture Evaluation		
3	Architecture design decision making		
4	ATAM- Architecture Tradeoff Analysis Method		
5	CBAM- Cost Benefit Analysis Method		
6	Moving from One System to Many		
7	Software Product Lines		
8	Building systems from off the shelf components		
9	Software Architecture in future		

UNIT-III: Design Patterns **CO3: Understand and learn about Creational patterns** **TB:" Design Patterns, Erich Gamma, Pearson Education, 1995 "**			
1	Design Patterns	**From: 01/12/2020 To 12/12/2020**	**Online Class with MS Teams**
2	Pattern Description		
3	Organizing catalogs		
4	Role in solving design problems		
5	Selection and usage		
6	**Creational Patterns**		
7	Abstract factory		
8	Builder		
9	Factory method		
10	Prototype		
11	Singleton		
UNIT-IV: Structural Patterns **CO4: Understand and learn about Structural patterns** **TB:" Design Patterns, Erich Gamma, Pearson Education, 1995 "**			
1	**UNIT-IV:** **Structural Patterns**	**From: 14/12/2020 To 26/12/2021**	**Online Class with MS Teams**
2	Adapter		
3	Bridge		
4	Composite		
5	Decorator		
6	Façade		
7	Flyweight		
8	PROXY		
11	Bridge		
12	visitor		
UNIT-V: Behavioral Patterns **CO5: Understand and learn about Behavioral patterns** **TB " Design Patterns, Erich Gamma, Pearson Education, 1995 "**			
1	**Behavioral Patterns**	**From: 27/12/2020 To 11/1/2021**	**Online Class with MS Teams**
2	Chain of responsibility		
3	command		
4	Interpreter		
5	iterator		
6	mediator		
7	memento		
8	observer		
9	state		
10	strategy		
11	template method		
12	visitor		

UNIT-VI: Case Studies CO6: Do a case study in utilizing architectural structures TB:" Software Architecture in Practice, second edition, Len Bass, Paul Clements & Rick Kazman, Pearson Education, 2003 "			
1	Case Studies	From: 12/1/2021 To 6/2/2021	Online Class with MS Teams
2	A-7E - A case study in utilizing architectural structures		
3	The World Wide Web - a case study in Interoperability		
4	Air Traffic Control – a case study in designing for high availability		
5	Celsius Tech – a case study in product line development		
6	A Case Study (Designing a Document Editor): Design Problems		
7	Document Structure		
8	Formatting, Embellishing the User Interface		
9	Supporting Multiple Look-and-Feel Standards		
10	Supporting Multiple Window Systems		
11	User Operations		

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TENTATIVE LESSON PLAN: RT41052

SOFTWARE ARCHITECTURE AND DESIGN PATTERNS

Course Title: SOFTWARE ARCHITECTURE AND DESIGN PATTERNS		
Section: B	Date:01-11-20	Page No: 01 of 04
Revision No: 00	Prepared By:Dr. A. RADHIKA	Approved By: HOD

Tools: MS Teams, Black Board, PPTs

No. of Periods	Topic	Date	Mode of Delivery
Unit-1 :Envisioning Architecture **CO1: Able to analyze the architecture and build the system from the component.** **TB:" Software Architecture in Practice, second edition, Len Bass, Paul Clements & Rick Kazman, Pearson Education, 2003 "**			
1	**Envisioning Architecture**	**From: 02/11/2020 To 18/11/2020**	**Online Class with MS Teams**
2	The Architecture Business Cycle		
3	What is Software Architecture		
4	Architectural patterns		
5	Reference models		
6	Reference architectures		
7	Architectural structures and views		
8	Creating and Architecture		
9	Quality Attributes		
10	Achieving qualities		
11	Architectural styles and patterns		
12	Designing the Architecture		
13	Documenting software architectures		
14	Reconstructing Software Architecture.		
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1	Analyzing Architectures	**From: 19/11/2020 To 30/11/2020**	**Online Class with MS Teams**
2	Architecture Evaluation		
3	Architecture design decision making		
4	ATAM- Architecture Tradeoff Analysis Method		
5	CBAM- Cost Benefit Analysis Method		
6	Moving from One System to Many		
7	Software Product Lines		
8	Building systems from off the shelf components		
9	Software Architecture in future		

UNIT-III: Design Patterns **CO3: Understand and learn about Creational patterns** **TB:" Design Patterns, Erich Gamma, Pearson Education, 1995 "**			
1	Design Patterns	**From: 01/12/2020 To 12/12/2020**	**Online Class with MS Teams**
2	Pattern Description		
3	Organizing catalogs		
4	Role in solving design problems		
5	Selection and usage		
6	**Creational Patterns**		
7	Abstract factory		
8	Builder		
9	Factory method		
10	Prototype		
11	Singleton		
UNIT-IV: Structural Patterns **CO4: Understand and learn about Structural patterns** **TB:" Design Patterns, Erich Gamma, Pearson Education, 1995 "**			
1	**UNIT-IV:** **Structural Patterns**	**From: 14/12/2020 To 26/12/2021**	**Online Class with MS Teams**
2	Adapter		
3	Bridge		
4	Composite		
5	Decorator		
6	Façade		
7	Flyweight		
8	PROXY		
11	Bridge		
12	visitor		
UNIT-V: Behavioral Patterns **CO5: Understand and learn about Behavioral patterns** **TB " Design Patterns, Erich Gamma, Pearson Education, 1995 "**			
1	**Behavioral Patterns**	**From: 27/12/2020 To 11/1/2021**	**Online Class with MS Teams**
2	Chain of responsibility		
3	command		
4	Interpreter		
5	iterator		
6	mediator		
7	memento		
8	observer		
9	state		
10	strategy		
11	template method		
12	visitor		

UNIT-VI: Case Studies CO6: Do a case study in utilizing architectural structures TB:" Software Architecture in Practice, second edition, Len Bass, Paul Clements & Rick Kazman, Pearson Education, 2003 "			
1	Case Studies	From: 12/1/2021 To 6/2/2021	Online Class with MS Teams
2	A-7E - A case study in utilizing architectural structures		
3	The World Wide Web - a case study in Interoperability		
4	Air Traffic Control – a case study in designing for high availability		
5	Celsius Tech – a case study in product line development		
6	A Case Study (Designing a Document Editor): Design Problems		
7	Document Structure		
8	Formatting, Embellishing the User Interface		
9	Supporting Multiple Look-and-Feel Standards		
10	Supporting Multiple Window Systems		
11	User Operations		

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TENTATIVE LESSON PLAN

Course Title: Web Technologies(R1641053)		
Section : Sec A	**Date : 02/11/2020**	**Page No :** 01 of 04
Revision No : 00	**Prepared By : Dr.N.Neelima Priyanka**	**Approved By : HOD**

Tools: Black board, PPTs, Moodle

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-I Introduction to HTML,CSS CO1:Ability to Understood the Static web page creation, creating rich web pages using CSS and DHTML with Javascript TB1: Web Technologies, HTML< JavaScript, PHP, Java, JSP, XML and AJAX, Black book, Dream Tech.			
1	Basic Syntax	2-11-20 To 15-11-20	Lecture Interspersed With discussions
2	Standard HTML Document Structure		
3	Basic Text Markup, Images		
4	HypertextLinks, Lists, Tables		
5	Forms, HTML5		
6	CSS: Levels of Style Sheet		
7	CSS: Style Specification Formats		
8	CSS: Selector Forms		
9	CSS: The Box Model		
10	CSS: Conflict Resolution		
11	tutorial		
UNIT-II Java script CO2: Ability to understanding of validating HTML Pages TB1: Hadoop: The Definitive Guide by Tom White, 3rd Edition, O'reilly			
1	The Basic of Java script: Objects, Primitives Operations and Expressions		
2	The Basic of Java script: Screen Output andKeyboard Input		

3	The Basic of Java script: Control Statements	16-11-20 To 30-11-20	Lecture interspersed with discussions
4	The Basic of Java script:Object Creation and Modification		
5	The Basic of Java script: Arrays		
6	The Basic of Java script: Functions		
7	The Basic of Java script: Constructors,		
8	Pattern Matching using		
9	Regular Expressions		
10	DHTML: Positioning Moving and Changing Elements		

UNIT-III : XML

CO3: Ability to understood a technique for creating fast and dynamic web pages using AJAX (asynchronous Request processing)

TB1: Web Technologies, HTML< JavaScript, PHP, Java, JSP, XML and AJAX, Black book, Dream Tech.

1	UNIT-III XML: Document type Definition, XML schemas	1-12-20 To 18-12-20	Lecture interspersed with discussions
2	XML: Document type Definition, XML schemas,		
3	XML:, Document object model,		
4	XML: XSLT,		
5	XML:,DOM and SAX Approaches,		
6	AJAX A New Approach: Introduction to AJAX,		

	Integrating PHP and AJAX.		
7	tutorial		
UNIT-IV :PHP Programming: Introducing PHP CO4: Ability to create Dynamic applications using PHP TB1: Web Technologies, HTML< JavaScript, PHP, Java, JSP, XML and AJAX, Black book, Dream Tech.			
1	PHP Programming: Introducing PHP: Creating PHP script, Running PHP script..	20-12-20 To 7-1-21	Lecture interspersed with discussions
2	PHP Programming: Introducing PHP: Running PHP script.		
3	PHP Programming: Introducing PHP: Working with variables and constants: Using variables		
4	Tutorial Hour		
5	PHP Programming: Using constants		
6	PHP Programming: Data types		
7	PHP Programming: Operators.		
8	PHP Programming: Controlling program flow: Conditional statements,Control statements,		
9	PHP Programming: Arrays		

10	PHP Programming: functions.		
11	PHP Programming: Working with forms and Databases such as MySQL.		
UNIT-V :Introduction to PERL CO5: To Ability to developthe programs in Perl to develop GUI application as well as web applications TB1: Programming Perl, 4ed, Tom Christiansen, Jonathan Orwant, Oreilly (2012)			
1	Introduction to PERL	8-1-21 To 20-1-21	Lecture interspersed with discussions
2	Operators and if statements,		
3	Program design and control structures.		
4	Arrays, Hashs		
5	File handling, Regular expressions,		
6	Subroutines, Retrieving documents from the web withPerl.		
UNIT-VI: Introduction to Ruby, CO6: Ability to developthe programs in Ruby to develop GUI application as well as web applications using Ruby on Rails TB1: Ruby on Rails Up and Running, Lightning fast Web development, Bruce Tate, CurtHibbs, Oreilly (2006)			
1	Introduction to Ruby		
2	Introduction to Ruby, Variables		

3	Variables, types,	21-1-21 To 10-2-21	Lecture interspersed with discussions
4	simple I/O, Control		
5	Arrays		
6	Hashes		
7	Methods		
8	Classes		
9	Iterators		
10	Pattern Matching.		
11	Overview of Rails.		
12	tutorial		

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TENTATIVE LESSON PLAN

Course Title: Web Technologies(R1641053)		
Section : Sec B	**Date : 02/11/2020**	**Page No :** 01 of 04
Revision No : 00	**Prepared By : Dr.N.Neelima Priyanka**	**Approved By : HOD**

Tools: Black board, PPTs, Moodle

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-I Introduction to HTML,CSS CO1:Ability to Understood the Static web page creation, creating rich web pages using CSS and DHTML with Javascript TB1: Web Technologies, HTML< JavaScript, PHP, Java, JSP, XML and AJAX, Black book, Dream Tech.			
1	Basic Syntax	2-11-20 To 15-11-20	Lecture Interspersed With discussions
2	Standard HTML Document Structure		
3	Basic Text Markup, Images		
4	HypertextLinks, Lists, Tables		
5	Forms, HTML5		
6	CSS: Levels of Style Sheet		
7	CSS: Style Specification Formats		
8	CSS: Selector Forms		
9	CSS: The Box Model		
10	CSS: Conflict Resolution		
11	tutorial		
UNIT-II Java script CO2: Ability to understanding of validating HTML Pages TB1: Hadoop: The Definitive Guide by Tom White, 3rd Edition, O'reilly			
1	The Basic of Java script: Objects, Primitives Operations and Expressions		
2	The Basic of Java script: Screen Output andKeyboard Input		

3	The Basic of Java script: Control Statements	16-11-20 To 30-11-20	Lecture interspersed with discussions
4	The Basic of Java script:Object Creation and Modification		
5	The Basic of Java script: Arrays		
6	The Basic of Java script: Functions		
7	The Basic of Java script: Constructors,		
8	Pattern Matching using		
9	Regular Expressions		
10	DHTML: Positioning Moving and Changing Elements		

UNIT-III : XML

CO3: Ability to understood a technique for creating fast and dynamic web pages using AJAX (asynchronous Request processing)

TB1: Web Technologies, HTML< JavaScript, PHP, Java, JSP, XML and AJAX, Black book, Dream Tech.

1	UNIT-III XML: Document type Definition, XML schemas	1-12-20 To 18-12-20	Lecture interspersed with discussions
2	XML: Document type Definition, XML schemas,		
3	XML:, Document object model,		
4	XML: XSLT,		
5	XML:,DOM and SAX Approaches,		
6	AJAX A New Approach: Introduction to AJAX,		

	Integrating PHP and AJAX.		
7	tutorial		
UNIT-IV :PHP Programming: Introducing PHP CO4: Ability to create Dynamic applications using PHP TB1: Web Technologies, HTML< JavaScript, PHP, Java, JSP, XML and AJAX, Black book, Dream Tech.			
1	PHP Programming: Introducing PHP: Creating PHP script, Running PHP script..	20-12-20 To 7-1-21	Lecture interspersed with discussions
2	PHP Programming: Introducing PHP: Running PHP script.		
3	PHP Programming: Introducing PHP: Working with variables and constants: Using variables		
4	Tutorial Hour		
5	PHP Programming: Using constants		
6	PHP Programming: Data types		
7	PHP Programming: Operators.		
8	PHP Programming: Controlling program flow: Conditional statements,Control statements,		
9	PHP Programming: Arrays		

10	PHP Programming: functions.		
11	PHP Programming: Working with forms and Databases such as MySQL.		
UNIT-V :Introduction to PERL CO5: To Ability to developthe programs in Perl to develop GUI application as well as web applications TB1: Programming Perl, 4ed, Tom Christiansen, Jonathan Orwant, Oreilly (2012)			
1	Introduction to PERL	8-1-21 To 20-1-21	Lecture interspersed with discussions
2	Operators and if statements,		
3	Program design and control structures.		
4	Arrays, Hashs		
5	File handling, Regular expressions,		
6	Subroutines, Retrieving documents from the web withPerl.		
UNIT-VI: Introduction to Ruby, CO6: Ability to developthe programs in Ruby to develop GUI application as well as web applications using Ruby on Rails TB1: Ruby on Rails Up and Running, Lightning fast Web development, Bruce Tate, CurtHibbs, Oreilly (2006)			
1	Introduction to Ruby		
2	Introduction to Ruby, Variables		

3	Variables, types,	21-1-21 To 10-2-21	Lecture interspersed with discussions
4	simple I/O, Control		
5	Arrays		
6	Hashes		
7	Methods		
8	Classes		
9	Iterators		
10	Pattern Matching.		
11	Overview of Rails.		
12	tutorial		

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TENTATIVE LESSION PLAN: R1641054
MANAGERIAL ECONOMICS & FINANCIAL ANALYSIS

Course Title: MANAGERIAL ECONOMICS & FINANCIAL ANALYSIS(R1641054)		
Section : Sec A & B	**Date : 12/08/2020**	**Page No :** 01 of 03
Revision No : 00	**Prepared By : B.NAVEEN**	**Approved By : HOD**

Tools : Black board, PPTs,

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT –I	**INTRODUCTION TO MANAGERIAL ECONOMICS**		
CO1: To acquaint the student with basic knowledge of managerial economics, managerial decision areas, basic economics tools, concept of demand, law of demand, elasticity of demand, types of elasticity measurements of elasticity and demand forecasting.			
TB :: A.R.Arya sri, "Managerial Economics & Financial Analysis", 2005, TMH.			
1.	Introduction to Managerial Economics, Definitions, Characteristics of ME	17-08-2020	Lecture interspersed with discussions
2.	Nature and Scope of Managerial Economics	17-08-2020	
3.	Managerial Economics related to Other Areas	18-08-2020	
4.	Basic Economic Tools in ME	18-08-2020	
5.	Introduction to Demand – Meaning & Definition, Features of Demand	19-08-2020	
6.	Determinants of Demand	20-08-2020	
7.	Law of Demand & Its exceptions, Demand Function	21-08-2020	
8.	Introduction to Elasticity of Demand	24-08-2020	
9.	Types of Elasticity of Demand	25-08-2020	
10.	Types of price Elasticity of Demand	26-08-2020	
11.	Measurement of Price Elasticity of Demand	27-08-2020	
12.	Introduction Demand Forecasting	30-08-2020	
13.	Importance of Demand Forecasting	01-09-2020	
14.	Demand Forecasting Methods	03-09-2020 & 04-09-2020	
15.	**Tutorial**	04-09-2020	
UNIT –II	**PRODUCTION, PRODUCTION FUNCTION&COST ANALYSIS**		
CO2: TO acquaint the student with basic knowledge of production, factors of production, various production functions, least cost combinations of inputs, cost concepts, breakeven analysis to avoid losses.			
TB: A.R.Arya sri, "Managerial Economics & Financial Analysis", 2005, TMH.			
16.	Introduction to Production : Meaning & Definition, Production Function	06/09/2020	Lecture interspersed with discussions
17.	Factors of production, production function with one variable factor	06/09/2020	
18.	Law of Variable Proportions	07/09/2020	
19.	Factors of production, production function with two variable factors	10/09/2020	
20.	Concept of Isocosts, Isoquants	09/09/2020	
21.	MRTS, Least Cost Combination	14/09/2020	

No. of Periods	TOPIC	DATE	Mode of Delivery
22.	Cobb-Douglas Production Function	14/09/2020	Lecture interspersed with discussions
23.	Economies of Scale& diseconomies of scale	15/09/2020	
24.	Returns to Scale & returns to factors	15/09/2020	
25.	Concept of cost & Various Cost Concepts	16/09/2020	
26.	Introduction to Break Even Analysis	18/09/2020	
27.	Determination of Break Even Point with Graph	18/09/2020	
28.	Calculation of Break Even Point (BEP) algebraic method	30/09/2020	
29.	**Tutorial**	30/09/2020	
UNIT - III MARKETS AND COMPETITION , PRICING POLICIES **CO3: Gain knowledge about market, types of markets, competition, price determination under different market conditions, And various pricing methods.** **TB: A.R.Arya sri, "Managerial Economics & Financial Analysis", 2005, TMH.**			
30.	Introduction to Markets: Meaning & Definition, Features	01/10/2020	Lecture interspersed with discussions
31.	Types of markets, market structure	02/10/2020	
32.	Price Determination under perfect competition	03/10/2020	
33.	Equilibrium point of firm and industry	05/10/2020	
34.	Price Determination under Monopoly	07/10/2020	
35.	Equilibrium point of firm and industry in monopoly	12/10/2020	
36.	Price Determination under Monopolistic Competition	12/10/2020	
37.	Price Determination under Oligopoly	13/10/2020	
38.	Managerial Theories of the Firm	13/10/2020	
39.	Marries and Williamson theory of firm	14/10/2020	
40.	Pricing, pricing objectives.	14/10/2020	
41.	Various Methods of Pricing	16/10/2020	
UNIT – IV FORMS OF BUSINESS ORGANIZATIONS AND BUSINESS CYCLE **CO4: TO understand about business, types of business like sole trader ship, partnership, joint stock companies, business cycle.** **TB: A.R.Arya sri, "Managerial Economics & Financial Analysis", 2005, TMH**			
42.	Introduction to Business: Definition, Features	16/10/2020	Lecture interspersed with discussions
43.	Sole Proprietorship : Features, Merits, Demerits	17/10/2020	
44.	Partnership : Features, Merits, Demerits,kinds of partners	17/10/2020	
45.	Joint Stock Company : Features, Merits, Demerits	19/10/2020	
46.	Public limited and private limited companies, features	19/10/2020	
47.	Public Enterprises : Features, Merits, Demerits	20/10/2020	
48.	Phases of Business Cycles	20/10/2020 & 21/10/2020	

UNIT – V INTRODUCTION TO FINANCIAL ACCOUNTING

CO5: TO know and understand about accounting process, types of accounts, principles of accounting, preparation of journal, ledger, trail balance and final accounts with

No. of Periods	TOPIC	DATE	Mode of Delivery
49.	Introduction to Accounting : Meaning & Definition, Classification of Accounts	25/10/2020	Lecture interspersed with discussions
50.	Accounting Process	30/10/2020	
51.	Principles of accounting(GAAP)	03/11/2020	
52.	Accounting cycle	03/11/2020	
53.	Preparation of Journal : Problems	04/11/2020	
54.	Preparation of Ledger : Problems	05/11/2020	
55.	Preparation of Trail Balance : Problems	05/11/2020	
56.	Final Accounts (Trading ,profit & loss A/C, Balance Sheet)	06/11/2020	
57.	Final Accounts with Adjustments	06/11/2020	
58.	Treatment of adjustments in preparation of final accounts.	06/11/2020	
59.	Introduction to Financial Statement Analysis: Importance, Objectives.	09/11/2020	Lecture interspersed with discussions
60.	Classification of Ratios : Liquidity Ratios	10/11/2020	
61.	Classification of Ratios : Activity Ratios	12/11/2020	
62.	Classification of Ratios : Solvency Ratios	12/11/2020	
63.	Classification of Ratios :Profitability Ratios	12/11/2020	
64.	Preparation of Changes in Working Capital	13/11/2020	
65.	Preparation of Funds Flow Statement	13/11/2020	
66.	Preparation of Cash Flow Statement	13/11/2020	
67.	Introduction to Capital Budgeting: Meaning, Definition, Need.	14/11/2020	Lecture interspersed with discussions
68.	Methods of Capital Budgeting: Pay Back Period (PBP),	14/11/2020	
69.	Calculation of Accounting Rate of Return (ARR)	15/11/2020	
70.	Calculation of Net Present Value (NPV)	16/11/2020	
71.	Calculation of Internal Rate of Return (IRR)	19/11/2020	
72.	Calculation of Profitability Index	23/11/2020	
73.	Merits and Demerits of Capital Budgeting Techniques.	25/11/2020	
74.	Previous QP problems solution	25/11/2020	

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Approved by AICTE, Affiliated to JNTUK, Kakinada
(ISO 9001:2015 Certified Institution)
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

TENTATIVE LESSON PLAN : R164105A

Course Title: Big Data Analytics		
Section : Sec A &B	**Date : 01-11-20**	**Page No :** 01 of 04
Revision No : 00	**Prepared By : N V MADHU BINDU**	**Approved By : HOD**

Tools: Black board, PPTs, Moodle

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-I Data structures in Java **CO1: To learn Data structure concepts and implementation in java** **TB1: Hadoop: The Definitive Guide by Tom White, 3rd Edition, O'reilly**			
1	Data structures in java : Linked list	**From:** **02/11/2020** **To** **18/11/2020**	**Online Class with** **MS Teams**
2	stacks, Queues		
3	Sets		
4	Maps		
5	Generic class, Type Parameters		
6	Tutorial: Data Structures		
7	Implementing Generic Methods		
8	Wrapper classes		
9	Concept of serialization		
10	Serialization		
11	Tutorial		
UNIT-II Working with Big Data **CO1: To gain knowledge on different file systems in Hadoop like Google File System(GFS) and Hadoop Distributive File System(HDFS)** **TB1: Hadoop: The Definitive Guide by Tom White, 3rd Edition, O'reilly**			
1	Working with Big Data: Google File System		

2	Hadoop File System(HDFS)	From: 19/11/2020 To 30/11/2020	Online Class with MS Teams
3	Name Node, Data Node		
4	Secondary node		
5	Job Tracker, Task Tracker		
6	Standalone Mode		
7	Tutorial		
8	Local Pseudo-distributed mode		
9	Fully Distributed mode		
10	Configuring XML Files		
No. of Periods	**TOPIC**	**Date**	**Mode of Delivery**
UNIT-III Writing MapReduce Programs **CO3: To learn basic Map Reduce Frame work in Hadoop.** **TB1: Hadoop: The Definitive Guide by Tom White, 3rd Edition, O'reilly**			
1	Map-Reduce Program	From: 01/12/2020 To 12/12/2020	Online Class with MS Teams
2	Old-Map Reduce Frame work		
3	New-Map Reduce Frame work		
4	Driver Code		
5	Mapper Code, Reducer Code		
6	Record Reader		
7	Combiner, Partitioner		
UNIT-IV Hadoop I/O **CO4: To assimilate Hadoop Writable and Readable interface.** **TB1: Hadoop: The Definitive Guide by Tom White, 3rd Edition, O'reilly**			
No. of Periods	**TOPIC**		

1	Hadoop I/O: The Writable Interface	**From:** **14/12/2020 To 26/12/2021**	**Online Class with MS Teams**
2	Writable Comparable		
3	Comparators		
4	Writable classes: Writable Wrappers for java Primitives		
5	Writable classes		
6	Text, Bytes Writable		
7	Null Writable, Object Writable		
8	Generic Writable		
9	Tutorial		
10	Writable Collections		
11	Custom Writable		
12	Implementing a Raw Comparator for speed		
13	Implementing a Raw Comparator for speed		
14	Tutorial		
15	Custom Comparators		
UNIT-V	**Pig: Hadoop Programming Made Easier** **CO5: To gain knowledge on Pig Scripting language** **TB1: Hadoop: The Definitive Guide by Tom White, 3rd Edition, O'reilly**		
1	PIG: Hadoop Programming made easier: Admiring the Pig Architecture	**From:** **27/12/2020 To 11/1/2021**	**Online Class with MS Teams**
2	Working with Pig		
3	Running Pig scripts		
4	Checking out the pig script interfaces		

5	Tutorial		
6	Scripting with pig Latin		
UNIT-VI Applying Structure to Hadoop Data with Hive **CO6: To learn Query language related to Hive like Hive Query Langugae** **TB1: Hadoop: The Definitive Guide by Tom White, 3rd Edition, O'reilly**			
1	Applying structure to Hadoop data with Hive:	**From:** **12/1/2021** **To** **6/2/2021**	**Online Class with MS Teams**
2	Saying hello to Hive		
3	Seeing how the Hive is put together		
4	Tutorial		
5	Getting started with Apache Hive		
6	Examining the Hive Clients		
7	Working with Hive Data Types		
8	Creating and managing databases and tables		
9	Seeing how the Hive data Manipulation language works		
10	Querying and analyzing data		
11	Tutorial		

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(ISO 9001:2015 Certified Institution)
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

TENTATIVE LESSON PLAN: R164105D

Course Title : Cloud Computing		
Section: Sec A&B	**Date : 01-11-2020**	
Revision No : 00	**Prepared By : M. ANITHA**	**Approved By : HOD**

Tools: Black board, PPTs

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-1(Systems modeling, Clustering and virtualization) **CO1: . Describe Scalable Computing over the Internet** **TB: Distributed and Cloud Computing, Kai Hwang, Geoffry C. Fox, Jack J. Dongarra MK Elsevie.**			
1.	Scalable Computing over the Internet	**From: 2/11/2020 To 18/11/2020**	**Online Class with MS Teams**
2.	Technologies for Network based systems		
3.	System models for Distributed and Cloud Computing		
4.	Attribute grammars		
5.	Software environments for distributed systems and clouds		
6.	Performance		
7.	Security		
8.	Energy Efficiency		
UNIT-2(Virtual Machines and Virtualization of Clusters and Data Centers): **CO2: Explain Levels of virtualization structures / Tools I/o Devices, Resource managment.** **TB: Distributed and Cloud Computing, Kai Hwang, Geoffry C. Fox, Jack J. Dongarra MK Elsevier.**			
9.	Virtual Machines and Virtualization of Clusters and Data Centers	**From: 19/11/2020 To 30/11/2020**	**Online Class with MS Teams**
10.	Virtualization Structures		
11.	Tools and mechanisms		
12.	Virtualization of CPU		
13.	Memory		
14.	I/O Devices		
15.	Virtual Clusters		
16.	Resource Management		
17.	Virtualization for Data Center Automation		
UNIT3(Cloud Platform Architecture) **CO 3:** Explain Cloud computing models service, message oriented middleware **TB: Cloud Computing, Theory and Practice, Dan C Marinescu, MK Elsevier.**			
18.	Cloud Computing and service Models	**From: 01/12/2020 To 12/12/2020**	**Online Class with MS Teams**
19.	Architectural Design of Compute and Storage Clouds		
20.	Public Cloud Platforms		
21.	Inter Cloud Resource Management		
22.	Cloud Security.		
23.	Trust Management		
24.	Service Oriented Architecture		

25.	Message Oriented Middleware		

UNIT-4(Cloud Programming and Software Environments):
CO4: Creating Azure accounts and doing cloud based problems
TB: Cloud Computing, A Hands on approach, ArshadeepBahga, Vijay Madisetti, University Press

No. of Periods	TOPIC	DATE	Mode of Delivery
26.	Features of Cloud and Grid Platforms	From: 4/12/2020 To 6/12/2021	Online Class with MS Teams
27.	Parallel & Distributed Programming Paradigms		
28.	Programming Support of Google App Engine		
29.	Programming on Amazon AWS and Microsoft Azure		
30.	Emerging Cloud Software Environments		

UNIT-5(Cloud Resource Management and Scheduling):
CO 5: Understand and adopt policies task scheduling, thresholds, deadlines.
TB: Cloud Computing, Theory and Practice, Dan C Marinescu, MK Elsevier.

31.	Policies and Mechanisms for Resource Management Applications of Control Theory to Task Scheduling on a Cloud	From: 27/12/2020 To 11/1/2021	Online Class with MS Teams
32.	Stability of a Two Level Resource Allocation Architecture		
33.	Feedback Control Based on Dynamic Thresholds		
34.	Coordination of Specialized Autonomic Performance Managers, Resource Bundling		
35.	Scheduling Algorithms for Computing Clouds		
36.	Fair Queuing, Start Time Fair Queuing		
37.	Borrowed Virtual Time		
38.	Cloud Scheduling Subject to Deadlines		
39.	Scheduling MapReduce Applications Subject to Deadlines.		

UNIT-6 (Storage Systems):
CO 5: Creating hadoop, Big Table, AmazonStorage services
TB: Cloud Computing, A Hands on approach, ArshadeepBahga, Vijay Madisetti, University Press.

40.	Evolution of storage technology	From: 12/1/2021 To 6/2/2021	Online Class with MS Teams
41.	storage models		
42.	file systems and database		
43.	distributed file systems		
44.	general parallel file systems		
45.	Google file system		
46.	Apache Hadoop		
47.	Big Table, Megastore, Amazon Simple Storage Service (S3)		

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