

Gowrivakkam, Chennai-600073. Affiliated to University of Madras

DEPARTMENT OF COMPUTER APPLICATIONS

2018-2019

COURSE OUTCOMES

YEAR/ SEM: I/ I - CLA1L - TAMIL I

| NO. | COURSE OUTCOME |
|--------|---|
| C101.1 | நாட்டுப்புற மக்களின் வாழ்வியல் பயன்பாடுகளை அறிகிறார்கள். |
| C101.2 | புதுக்கவிதைகளின் வாயிலாகப் புதுமைக் கருத்துக்களையும் சமூக சிக்கல்களையும் உணர்கின்றனர் |
| C101.3 | சிறுகதைகளின் வாயிலாக சமூக மக்களின் வாழ்க்கை நிலையை அறிகிறார்கள். |
| C101.4 | சந்திரஹரி நாடகம் வாயிலாக பொய் என்றும் துன்பமே என்று அறிகிறார்கள |
| C101.5 | இலக்கிய வரலாற்றின் வாயிலாக நாட்டுப்புறவியல், சிறுகதை, புதினம், நாடகம், கவிதை ஆகியவற்றில் உள்ள சமூக நீதிகளையும், சிறப்புகளையும் அறிகிறார்கள் |

YEAR/ SEM: I/ I – CLE1E - HINDI I

| NO. | COURSE OUTCOME |
|--------|--|
| C102.1 | To develop Communicating, Reading, and Writing skills in Hindi |
| C102.2 | To understand the vision of Prem Chand about the poor people |
| C102.3 | To learn the literary work based on foundation laid by the Scholars |
| C102.4 | To understand the meaning and concept of Functional Hindi |
| C102.5 | To understand the various forms of Functional Hindi according to its area of application |

YEAR/ SEM: I/I – CLZ1K - ENGLISH I

| NO. | COURSE OUTCOME |
|--------|---|
| C103.1 | To read and understand any text in English listening to the inputs given in the classroom |



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| C103.2 | To make a detailed study of a few sample masterpieces of English poetry |
|--------|---|
| C103.3 | To write paragraphs and essays |
| C103.4 | To get accurate both in oral and written communication to be strong In Grammar and its usage |
| C103.5 | To imbibe the rules of language unconsciously and tune to deduce language structure and usage |

YEAR/ SEM: I/I – SAU1A – FUNDAMENTALS OF DIGITAL COMPUTER

| NO. | COURSE OUTCOME |
|--------|--|
| C104.1 | To understand the basic concepts of Computer and the type of computers |
| C104.2 | To learn about the Number System such as decimal, hexadecimal, and octal & its conversions |
| C104.3 | To simplify the Boolean algebra and k-map using 2 or more variables |
| C104.4 | To understand the flip-flops and its types, counters and clocks |
| C104.5 | To understand about the half and full adder, multiplexer and demultiplexer |

YEAR/ SEM: I/I – SAZ11 – PC SOFTWARE LAB

| NO. | COURSE OUTCOME |
|--------|--|
| C105.1 | To Practice about manipulate and formatting a word document |
| C105.2 | To understand how to send a message to more recipients |
| C105.3 | To learn about working with Excel. |
| C105.4 | To create an employee payroll system using excel |
| C105.5 | To practice animation, slide show and templates using power point. |



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YEAR/ SEM: I/I – SBAMM – MATHEMATICS I

| NO. | COURSE OUTCOME |
|--------|---|
| C106.1 | To apply tools and ideas in Mathematics for Solving Applied Problems |
| C106.2 | To understand the importance of Matrices and its Applications |
| C106.3 | To acquire ideas on Theory of Equations and its Applications |
| C106.4 | To understand knowledge about the Expansions of Trigonometric Functions, Hyperbolic Functions. |
| C106.5 | To understand the Summation of Series |

YEAR/ SEM: I/I – NLT1C – BASIC TAMIL

| NO. | COURSE OUTCOME |
|--------|--|
| C107.1 | தமிழ் எழுத்துகளைத் தெரிந்துகொள்ளுதல் |
| C107.2 | தமிழ் ஒலியன்களை உச்சரிக்கக் கற்றுக்கொள்ளுதல் |
| C107.3 | எழுத்துக்களைக் கொண்டு சொற்களை உருவாக்குதல் |
| C107.4 | அன்றாடப் பயன்பட்டு சொற்களைப் பயிற்றுவித்தல் |
| C107.5 | தமிழ் மொழியை அறிந்து கொள்ளுதல் |

YEAR/ SEM: I/I – SNE1D - HTML

| NO. | COURSE OUTCOME |
|--------|--|
| C108.1 | To understand the basic concepts of html and its tags. |
| C108.2 | To illustrate about basic tags and its attributes. |
| C108.3 | To learn about ordered, unordered & definition list |
| C108.4 | To work with tables using table attributes |
| C108.5 | To learn about the frames and its types |



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YEAR/ SEM: I/I – TSSEA – ESSENTIALS OF LANGUAGE AND COMMUNICATION

| NO. | COURSE OUTCOME |
|--------|--|
| C109.1 | To develop effective communication skills (spoken and written). |
| C109.2 | To develop effective presentation skills. |
| C109.3 | To conduct effective business correspondence and prepare business reports which produce results. |
| C109.4 | Soft skills are in direct correlation with improved academic achievement. |
| C109.5 | To develop them both for the sake of their education, and the sake of them professional careers. |

YEAR/ SEM: I/II – CLA2H – TAMIL II

| NO. | COURSE OUTCOME |
|--------|---|
| C110.1 | மூவேந்தர்களின் அகம் மற்றும் புற வாழ்வு பற்றிய செய்திகளை அறிகிறார்கள். |
| C110.2 | சிற்றிலக்கியங்களான தமிழ்விடு தூது, குற்றிலக் குறவஞ்சி, முக்கூடற்பள்ளு வாயிலாக தமிழின் சிறப்பும் மலைவளமும், வேளாண் செய்திகளையும் அறிகிறார்கள். |
| C110.3 | நளவெண்பாவின் வாயிலாக சூதாட்டத்தால் விளையும் சீர்கேடுகளை அறிகிறார்கள் |
| C110.4 | சீறாப்புராணத்தின் வாயிலாக மனித நேயத்தையும், இரக்கக் குணத்தையும் அறிகிறார்கள். |
| C110.5 | மொழிப்பயிற்சியின் வாயிலாக இலக்கண அமைப்பு முறைகளை அறிகிறார்கள். |

YEAR/ SEM: I/II – CLE2G – HINDI II

| NO. | COURSE OUTCOME |
|--------|---|
| C111.1 | To understand the Drama and the stories based on social problems |
| C111.2 | To develop the approach of Hindi language |
| C111.3 | To understand the change in content and style of expression in short stories in modern period |



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| C111.4 | To develop the skills of Translation from Hindi to English by using high technical words |
|--------|--|
| C111.5 | To analyze the development of one act play |

YEAR/ SEM: I/II – CLZ2K – ENGLISH II

| NO. | COURSE OUTCOME |
|--------|--|
| C112.1 | To make a detailed study of a few sample masterpieces of English poetry |
| C112.2 | To apply critical frameworks to analyze the linguistic, cultural and historical background of texts written in English |
| C112.3 | To get familiar with the conventions of diverse textual genres including fiction, nonfiction, poetry, autobiography, biography, plays, etc. |
| C112.4 | The ability to transfer information in the writing tasks |
| C112.5 | To perform various speaking and writing tasks, such as roleplays, debates, group discussions apart from the use of correct spelling, punctuation |

YEAR/ SEM: I/II – SAE1A – PROGRAMMING IN C

| NO. | COURSE OUTCOME |
|--------|--|
| C113.1 | To understand the basics of C language |
| C113.2 | To understand the structure of conditional and looping statements in C |
| C113.3 | To grasp concepts related to functions and storage classes |
| C113.4 | To learn about arrays and their different types |
| C113.5 | To explore file operations and pointers in C programming |

YEAR/ SEM: I/II - SAE11 - PROGRAMMING IN C LAB

| NO. | COURSE OUTCOME |
|--------|--|
| C114.1 | To understand the basics of C Programming |
| C114.2 | To comprehend the manipulation of strings through practice |



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| C114.3 | To gain knowledge of recursion in programming |
|--------|---|
| C114.4 | To improve skills in matrix manipulations through practical exercises |
| C114.5 | To practice sorting and searching algorithms |

YEAR/ SEM: I/II – SBAMN – MATHEMATICS II

| NO. | COURSE OUTCOME |
|--------|--|
| C115.1 | To gain knowledge about basic concepts of Differential Equation, Laplace Transforms, Vector Analysis and Calculus. |
| C115.2 | To acquire the knowledge of mathematics in Computer studies |
| C115.3 | To understand the different methods of solving. Laplace and Inverse Laplace Transforms problems and applying it on solving Differential Equations |
| C115.4 | To understand the Types of Integration and Reduction Formula |
| C115.5 | To apply ideas in Vector Analysis and understanding the interpretation in Science |

YEAR/ SEM: I/II – SNE24 – HTML - LAB

| NO. | COURSE OUTCOME |
|--------|--|
| C116.1 | To Practice the basic tags of html |
| C116.2 | To understand how to use the image tags and its attributes |
| C116.3 | To learn about the list tags |
| C116.4 | To practice format of tables |
| C116.5 | To practice frame tags |



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YEAR/ SEM: I/II – NLT2D – BASIC TAMIL

| NO. | COURSE OUTCOME |
|--------|---|
| C117.1 | தமிழ் இலக்கியங்களை அறிந்துகொள்ளுதல் |
| C117.2 | அற இலக்கியங்களைத் தெரிந்துகொள்ளுதல் |
| C117.3 | திருக்குறளின் சிறப்புகளை அறிந்துகொள்ளுதல் |
| C117.4 | தமிழர்களின் பண்பாடு, நாகரிகம் போன்றவற்றைத் தெரிந்துகொள்ளுதல் |
| C117.5 | தமிழகத்தின் விழாக்களை அறிந்துகொள்ளுதல் |

YEAR/ SEM: I/II – TSSEC – ESSENTIALS OF SPOKEN AND PRESENTATION SKILLS

| NO. | COURSE OUTCOME |
|--------|--|
| C118.1 | To develop effective communication skills (spoken and written). |
| C118.2 | To develop effective presentation skills. |
| C118.3 | To conduct effective business correspondence and prepare business reports which produce results. |
| C118.4 | Soft skills are in direct correlation with improved academic achievement. |
| C118.5 | To develop them both for the sake of their education, and the sake of them professional careers. |

YEAR/ SEM: II/III – SAZ3A – PROGRAMMING IN C++ AND DATA STRUCTURES

| NO. | COURSE OUTCOME |
|--------|--|
| C201.1 | To understand the basic syntax and structure of C++ programs |
| C201.2 | To apply object-oriented programming principles to design and implement efficient code |
| C201.3 | To understand and implement fundamental data structures such as arrays, linked lists, stacks, queues and trees |
| C201.4 | To apply algorithmic design techniques, such as divide and conquer and dynamic programming to solve problems |



| C201.5 | To analyze and optimize code for time and space complexity |
|--------|--|
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YEAR/ SEM: II/III – SAZ3B – MICROPROCESSOR AND ITS APPLICATIONS

| NO. | COURSE OUTCOME |
|--------|--|
| C202.1 | To learn the difference between low- and high-level languages and to know about mnemonics and opcode |
| C202.2 | To learn about how to write simple Assembly Language Programs |
| C202.3 | To understand the concepts of counters, stack and subroutine |
| C202.4 | To describe about number system conversions with example |
| C202.5 | To understand the concepts of interrupts and memory interfaces |

YEAR/ SEM: II/III – SAZ3C – NUMERICAL AND STATISTICAL METHODS

| NO. | COURSE OUTCOME |
|--------|---|
| C203.1 | To implement various concepts of numerical analysis and statistics to solve real life problems |
| C203.2 | To analyze algebraic and transcendental equation by numerical methods |
| C203.3 | To derive numerical methods for various mathematical operations such as differentiation and integration |
| C203.4 | To communicate statistical concepts clearly and professionally in oral form |
| C203.5 | To recognize, describe, and calculate the measures of location and measures of variation |

YEAR/ SEM: II/III – SAZ31 – PROGRAMMING IN C++ USING DATA STRUCTURES (PRACTICAL)

| NO. | COURSE OUTCOME |
|--------|--|
| C204.1 | To gain hands-on experience with array and pointer implementations to reinforce stack operations |
| C204.2 | To explore the utilization of arrays and pointers in practicing queue operations for a deeper understanding. |



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| C204.3 | To acquire knowledge on expression evaluation techniques for effective problem- solving. |
|--------|---|
| C204.4 | To engage in practical exercises to master linked list operations and enhance programming skills. |
| C204.5 | To apply BFS and DFS traversal algorithms in practical scenarios for a comprehensive understanding of graph operations. |

YEAR/ SEM: II/III – SBZ3C – FINANCIAL ACCOUNTING

| NO. | COURSE OUTCOME |
|--------|--|
| C205.1 | To understand the basic principles of accounting. To understand the system of keeping financial accounting records |
| C205.2 | To understand the meaning and types of Depreciation and its Applications |
| C205.3 | To understand about branch accounting and departmental accounts |
| C205.4 | To analyze the relevance of hire purchase and installment system |
| C205.5 | To understand in detail about partnership, reconstitution, and the accounts in relation with that. |

YEAR/ SEM: II/III – TSSEG - PERSONALITY ENRICHMENT

| NO. | COURSE OUTCOME |
|--------|---|
| C206.1 | To develop and exhibit an accurate sense of self. |
| C206.2 | To demonstrate knowledge of personal beliefs and values and a commitment to continuing personal reflection and reassessment |
| C206.3 | To evaluate and improve upon personal leadership strengths and weaknesses |
| C206.4 | To build self-awareness, personal development, and life skills. |
| C206.5 | To assert strengthened personal character and further, an enhanced ethical sense. |

YEAR/ SEM: II/IV -SAZ4A - PROGRAMMING IN JAVA

| NO. | COURSE OUTCOME |
|--------|---|
| C207.1 | To acquire fundamental knowledge of the Java programming language |



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| C207.2 | To explore classes, objects, methods and strings through practical examples |
|--------|---|
| C207.3 | To grasp the concept of interfaces, packages and their various types |
| C207.4 | To demonstrate skills in handling files and managing errors and exceptions |
| C207.5 | To gain insights into network basics, AWT controls, AWT events and event handling |

YEAR/ SEM: II/IV - SAZ4B - OPERATING SYSTEM

| NO. | COURSE OUTCOME |
|--------|--|
| C208.1 | To understand the fundamentals of operating system and its functions |
| C208.2 | To learn about process synchronization, semaphore and deadlock |
| C208.3 | To understand the concept of memory, memory management and its types |
| C208.4 | To implement the concept of virtual memory, file system and its types |
| C208.5 | To explore the intricacies of I/O systems and secondary storage structures |

YEAR/ SEM: II/IV – SAZ4C – COMPUTER GRAPHICS

| NO. | COURSE OUTCOME |
|--------|---|
| C209.1 | To learn the brief survey of Computer Graphics, CRT, LED, LCD & plasma panel displays |
| C209.2 | To learn about various algorithm like DDA, Bradenham's for generating basic geometric shapes |
| C209.3 | To understand the 2D(basic) transformations using matrices and viewing co- ordinates |
| C209.4 | To understand the 3D transformations using matrices and display methods |
| C209.5 | To learn about viewing pipeline and coordinates, Hidden surface and hidden line elimination methods |



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YEAR/ SEM: II/IV – SAZ41 – JAVA PROGRAMMING LAB

| NO. | COURSE OUTCOME |
|--------|--|
| C210.1 | To showcase programs involving the String class and Stream class |
| C210.2 | To engage in exercises for random number generation and utilizing the Calendar class |
| C210.3 | To exhibit programs for database creation, vector classes, and packages |
| C210.4 | To create programs for threads, exception handling and file operations |
| C210.5 | To develop programs focusing on threads, exception handling and file manipulation |

YEAR/ SEM: II/IV - SBZ4A - COST AND MANAGEMENT ACCOUNTING

| NO. | COURSE OUTCOME |
|--------|--|
| C211.1 | To learn the theory and practices of cost and management accounting |
| C211.2 | To understand about the material management and pricing methods |
| C211.3 | To understand in detail about Labour cost and wage payment methods. |
| C211.4 | To study about Overhead and its apportionment |
| C211.5 | To study in detail about the marginal costing and the types of budgeting |

YEAR/ SEM: II/IV – TSSEN - QUANTITATIVE APPTITUDE

| NO. | COURSE OUTCOME |
|--------|---|
| C212.1 | To apply Quantitative Reasoning and Mathematical Methodologies to understand and to solve problems |
| C212.2 | To understand Brief Description of Learning Objective |
| C212.3 | To acquire Mental Alertness and have a sharp mind |
| C212.4 | To ensure testing ability in various Competitive Examinations |
| C212.5 | To enable the important measure for prospective business executives abilities. |



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YEAR/ SEM: II/IV – ENV4B – ENVIRONMENTAL STUDIES

| NO. | COURSE OUTCOME |
|--------|--|
| C213.1 | To know the scope and importance of environmental studies and to create public awareness for environmental protection |
| C213.2 | To elucidate the problems created by the over utilization of resources and to suggest alternate energy to meet our energy crisis/demand. |
| C213.3 | To give a neat sketch explanation of ecosystem, ecological succession, ecological pyramid, food chain and food web. |
| C213.4 | To know the different methods of biodiversity conservation |
| C213.5 | To analyze the effects of pollution and the role of individual for pollution control programme |

YEAR/ SEM: III/V – SAZ5A – DATABASE MANAGEMENT SYSTEM

| NO. | COURSE OUTCOME |
|--------|---|
| C301.1 | To acquire fundamental concepts of DBMS and Normal Forms |
| C301.2 | To comprehend the basic and general principles of SQL |
| C301.3 | To explore the generation of forms and reports |
| C301.4 | To understand user interface features and methods of data storage |
| C301.5 | To learn about database administration and different database types |

YEAR/ SEM: III/V - SAZ5B - SOFTWARE ENGINEERING

| NO. | COURSE OUTCOME |
|--------|---|
| C302.1 | To gain understanding of the fundamentals of Software Engineering |
| C302.2 | To assess software cost estimation and various techniques associated with it |
| C302.3 | To familiarize yourself with the basic and general concepts of Software Requirement Specifications |
| C302.4 | To grasp fundamental design concepts |
| C302.5 | To explore verification, validation techniques and the principles of software maintenance |



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YEAR/ SEM: III/V – SAZ5C – RESOURE MANGEMENT TECHNIQUES

| NO. | COURSE OUTCOME |
|--------|--|
| C303.1 | To design a mathematical model for an optimization problem in real life by adopting the techniques of OR |
| C303.2 | To solve shortest route problem |
| C303.3 | To evaluate the concepts in linear programming |
| C303.4 | To make use of simplex method to solve optimization problems |
| C303.5 | To utilize PERT and CPM in project management |

YEAR/ SEM: III/V – SAZ51 – RDBMS LAB

| NO. | COURSE OUTCOME |
|--------|--|
| C304.1 | To utilize DDL commands to construct a database and tables |
| C304.2 | To employ DML, DCL, and TCL commands for various operations |
| C304.3 | To construct applications for payroll, marksheet, and bank account |
| C304.4 | To engineer systems for inventory management, invoicing and library management |
| C304.5 | To design and code for student information, income tax processing, electricity bill, and telephone directories |

YEAR/ SEM: III/V – SEZ5A – VISUAL PROGRAMMING

| NO. | COURSE OUTCOME |
|--------|--|
| C305.1 | To learn about how to customize a form |
| C305.2 | To learn about how to display information and control structures |
| C305.3 | To understand the concepts of arrays, lists, sorting and searching methods |
| C305.4 | To generate the various dialog boxes and working with graphics |
| C305.5 | To learn about Event Handling and File Handling methods |



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YEAR/ SEM: III/V – VAE5Q – VALUE EDUCATION

| NO. | COURSE OUTCOME |
|--------|---|
| C306.1 | To understand the importance and of value education |
| C306.2 | To learn about salient values for life and problem-solving and decision-making skills |
| C306.3 | To know the importance of human rights & social values |
| C306.4 | To know the importance of environment and ecological balance |
| C306.5 | To learn about social evils and how to tackle them. |

YEAR/ SEM: III/VI - SAZ6A – WEB TECHNOLOGY

| NO. | COURSE OUTCOME |
|--------|--|
| C307.1 | To understand the basic concepts of VB Script |
| C307.2 | To implement Java Script basics and its control structures |
| C307.3 | To get knowledge about Java Script DOM |
| C307.4 | To understand the structure of ASP.NET and its basic controls |
| C307.5 | To learn about request and response objects & OLEDB connection |

YEAR/ SEM: III/VI - SAZ6B - DATA COMMUNICATION AND NETWORKING

| NO. | COURSE OUTCOME |
|--------|---|
| C308.1 | To understand about data communication, protocols, topologies and the OSI model |
| C308.2 | To apply error detection and correction methods |
| C308.3 | To acquire knowledge in multiplexing and switching |
| C308.4 | To understand the principles of ISDN and ATM networks |
| C308.5 | To utilize various routing algorithms |



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YEAR/ SEM: III/VI - SAZ6C - SOFTWARE TESTING

| NO. | COURSE OUTCOME |
|--------|--|
| C309.1 | To understand basic concepts of software testing and its purposes, debugging and its types of bugs |
| C309.2 | To enumerate the applications of flow/graphs, path testing and flow testing techniques |
| C309.3 | To understand the strategies of data flow testing and interface testing |
| C309.4 | To learn about the metrics, path products and its expressions, Test cases |
| C309.5 | To develop logic-based testing and to prepare state graphs and decision tables |

YEAR/ SEM: III/VI - SAZ61 - WEB APPLICATION LAB

| NO. | COURSE OUTCOME |
|--------|--|
| C310.1 | To apply VB Script to enhance client-side scripting capabilities, enabling efficient user interactions |
| C310.2 | To implement dynamic and interactive web features using Java Script |
| C310.3 | To master the concepts and practices of ASP.NET programming for developing robust and scalable web solutions |
| C310.4 | To exhibit the ability to analyze, design and implement effective solutions using this programming language within the ASP.NET framework |
| C310.5 | To integrate Java Script, VB Script and ASP.NET to create comprehensive and feature-rich web projects |

YEAR/ SEM: III/VI – SEZ6H – DATA MINING

| NO. | COURSE OUTCOME |
|--------|--|
| C311.1 | To acquire understanding of fundamental data mining functionalities, data warehousing and data preprocessing |
| C311.2 | To explore knowledge about data mining primitives, languages, data generalization and system architecture |
| C311.3 | To study mining association rules, relational databases and data warehouses |
| C311.4 | To gain insights into classification, its types, prediction and classifier accuracy |



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| C311.5 | To comprehend | cluster | analysis, | its | methods | and | model-based | clustering |
|--------|---------------|---------|-----------|-----|---------|-----|-------------|------------|
| | techniques | | | | | | | |

YEAR/ SEM: III/VI - SEZ6G - DISTRIBUTED COMPUTING

| NO. | COURSE OUTCOME | | | | |
|--------|---|--|--|--|--|
| C312.1 | To learn about distributed database, security & integrity, distributed processing, models for distributed computing | | | | |
| C312.2 | To gain knowledge about hardware concepts, software concepts, design issues | | | | |
| C312.3 | To learn about communications in distributed system. | | | | |
| C312.4 | To understand the concepts of synchronization, mutual exclusion, deadlock, and thread. | | | | |
| C312.5 | To understand about Distributed file system, implementations of new trends i distributed file systems | | | | |