SOFTWARE ENGINEERING (01CE0607)

Lab Manual

A.Y. 2024-25

Name :
Er.No. :
Semester:
Class :
Batch :

INDEX

Practical List

Sr. No.	Title	CO
1	**Problem Statement with Purpose, Scope, Literature Review, and Future Scope** Identify a relevant problem or project definition. Write a detailed problem statement for the system, along with its Purpose, Scope, Existing system details with a literature review and mention Future scope. (The problem statement is intended for a broad audience and should be written in non-technical terms.)	CO1
2	**Planning and Scheduling, for System Development** Perform Project Planning & scheduling by define and design effective policies, methodologies, and strategies to achieve the objectives of the selected system. Create a schedule by assigning tasks, allocating resources, and estimating budgets and time frames.	CO1
3	**Cost and Effort Estimation for Software Development** Perform a cost and effort estimation for the selected system by understanding the scope of the software to be developed.(Using Function Points)	CO1
4	**Software Requirement Specification (SRS) Development for the Selected System** Perform a requirement analysis and develop a Software Requirement Specification (SRS) sheet for the selected system. The SRS should include the following sections: 1. Functionality: Describe what the software is supposed to do. 2. External Interfaces: Explain how the software interacts with people, the system's hardware, other hardware, and other software. 3. Performance: Outline the expected speed, availability, response time, recovery time, and other performance-related characteristics of the software functions. 4. Attributes: Define considerations related to portability, correctness, maintainability, security, and other relevant attributes. 5. Design Constraints: Specify any design constraints imposed on the implementation, such as required standards, implementation languages, database integrity policies, resource limits, and the operating environment(s).	CO2
5	**System Analysis and Design for the Selected System** Perform system analysis on selected system.	CO3

	1. Systems analysis (what the system should do) 2. Systems design (how to accomplish the objective of the system.) (Hint: Flowcharts/ER diagrams)	
6	**User's view Analysis** Perform the user's view analysis for the suggested system by drawing Use case Diagram.	CO3
7	**Structural View Diagram** Design structural view diagram for the selected system. 1. Draw class Diagram, Object Diagram, Component Diagram	CO3
8	**Function -Oriented diagram** Design function-oriented diagram for the selected system using Data Flow Diagrams	C03
9	**Behavioral View diagram** Design the behavioral view diagram for the selected system. Use following diagrams. 1. Interaction Diagrams a. Sequence Diagrams b. Collaboration Diagram 2. State–Chart Diagrams 3. Activity Diagrams	CO3
10	**Case Study on Various Testing Tools** Conduct a case study on different software testing tools. The study should include the following: 1. Tool Overview: Provide an overview of several commonly used testing tools, including their features and capabilities. 2. Types of Testing Supported: Discuss the types of testing each tool supports (e.g., unit testing, integration testing, system testing, regression testing). 3. Comparison: Compare and contrast the tools in terms of ease of use, compatibility, cost, and effectiveness. 4. Practical Applications: Analyze the real-world application of these tools in software development projects. 5. Pros and Cons: Highlight the advantages and disadvantages of each testing tool based on your research.	CO4

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