PUNE INSTITUTE OF COMPUTER TECHNOLOGY

DHANKAWADI, PUNE -43

SCHEDULE OF LAB ASSIGNMENTS

ACADEMIC YEAR: 2025-2026

Department: Computer Engineering

Class: T.E.

Subject Name: Laboratory Practice-I Subject code: 310248

Date:01/07/2025

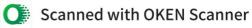
Semester: I

Examination scheme:

Term Work: 25 Practical: 25

	PART I: Systems Programming and Operating System		
GroupA (Any Two Assignments from Sr. No.1 to 3)			
Expt. No.	Problem Statement	Last date for performance	
A1-01	Design suitable Data structures and implement Pass-I of a two-pass assembler for pseudo-machine. Implementation should consist of a few instructions from each category and a few assembler directives.	02 Aug 2025	
A1-02	Design suitable Data structures and implement Pass-II of a two-pass assembler for pseudo-machine. The output of Pass-I(intermediate code file, symbol table and literal table) should be input for Pass-II.	16 Aug 2025	
A2-01	Design suitable data structures and implement Pass-I of a two-pass macro-processor.	30 Aug 2025	
A2-02	Design suitable data structures and implement Pass-II of a two-pass macro-processor. The output of Pass-I(MNT, MDT, and intermediate code file without any macro definitions) should be input for Pass-II.	13 Sept 2025	
	Group B (Any Two Assignments from Sr. No.4 to 7)		
	(Programming language: C/C++/JAVA/Python)		
B1	Write a program to solve Classical Problems of Synchronization using Mutex and Semaphore.	12 July 2025	
B2	Write a program to simulate CPU Scheduling Algorithms: FCFS,SJF (Preemptive),Priority (Non-Preemptive)and Round Robin (Preemptive).	12 July 2025	
В3	Write a program to simulate Memory placement strategies-best fit, first fit, next fit and worst fit.	27 Sept 2025	
B4	Write a program to simulate Page replacement algorithm.	27 Sept 2025	

Page 1 P:F:-LTL-UG/02/R1



PART II: Elective I (Any Two assignments from each elective subject are compulsory, all the assignments should be covered among different batch students)				
HumanComputer Interface				
(Programming tools recommended: GUI in python)				
1	Design a paper prototype for selected Graphical User Interface.	04 Oct 2025		
2	Implement GOMS (Goals, Operators, Methods, and Selection rules)modeling technique to model user's behavioral given scenario.	04 Oct 2025		
3	Design a User Interface in Python.	18 Oct 2025		
4	To redesign existing Graphical User Interface with screen complexity.	18 Oct 2025		
Distributed System				
1	Implementation of Inter-process communication using socket programming :implementing multithreaded echo server.	04 Oct 2025		
2	Implementation of RPC Mechanism.	04 Oct 2025		
3	Simulation of election algorithms(Ring and Bully).	18 Oct 2025		
4	Implementation of Clock Synchronization: a)NTP b) Lamport's clock.	18 Oct 2025		

Subject Coordinator Snehal P Shintre Head, Dept. of Comp. Engg. Dr. B. A. Sonkamble

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