

Lab Manual: Operating System & Linux Programming

Course Code: BCA-301

Semester: V

Program: Bachelor of Computer Applications

University: Guru Gobind Singh Indraprastha University

Institute: Tecnia Institute of Advanced Studies, Delhi

Cover Page

TECNIA INSTITUTE OF ADVANCED STUDIES, ROHINI, DELHI

LAB MANUAL

Operating System & Linux Programming

Course Code: BCA-301 | Semester: V

Name: _____

Roll No.: _____

Batch: _____ BCA-5EB

Faculty Name: _____ Ms. Sumita Thukral

Session: 2025-26

Weekly Lab Schedule

Week	Topic	Experiment Title	Tools Used
1	Linux Basics	File system navigation, permissions	Ubuntu
2	Shell Scripting	Conditional & loop-based scripts	Ubuntu
3	String & Array Handling	Reverse string, array sort	Ubuntu
4	File Handling	Word count, merge files	Ubuntu
5	Process Management	ps, kill, fork() in C	Ubuntu
6	CPU Scheduling	FCFS, SJF, RR, Priority	Ubuntu
7	Memory Management	First Fit, Best Fit, Paging	Ubuntu
8	File Systems	Contiguous, Linked, Indexed	Ubuntu
9	Synchronization	Producer-consumer, Reader-writer	Ubuntu
10	Deadlock	Banker's Algorithm	Ubuntu
11	Viva & Record Review	Oral exam + documentation check	Ubuntu
12	Internal Assessment	Final evaluation	Ubuntu

Lab Record

Experiment No.: ____

Title: _____

Date: _____

Objective: _____

Theory: _____

Algorithm / Procedure: _____

Code / Script: _____

Output / Screenshot: _____

Result: _____

Faculty Remarks: _____

Signature: _____



Evaluation Rubric

Criteria	Marks	Description
Execution & Output	10	Program runs correctly with expected output
Code Quality	5	Proper syntax, indentation, comments
Understanding (Viva)	5	Clear explanation of logic and theory
Record Maintenance	5	Neat, complete, and timely submissions
Attendance & Participation	5	Regular presence and engagement

Total: 30 marks per experiment
