



VIDYA JYOTHI INSTITUTE OF TECHNOLOGY

(An Autonomous Institution)

(Accredited by NAAC & NBA, Approved by AICTE New Delhi & Permanently Affiliated to JNTUH)
Aziznagar Gate, C.B. Post, Hyderabad – 500 075

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

III B.Tech I Semester

OPERATING SYSTEMS & COMPUTER NETWORKS LAB THROUGH LINUX (A15588)

Course outcomes: After completing this course the student must demonstrate the knowledge and ability to

1. Implement Data link layer framing methods.
2. Implement various algorithms for error detection and correction.
3. Simulate various routing algorithms.
4. Implement CPU scheduling algorithms.
5. Simulate various page replacement techniques and file allocation methods.
6. Implement deadlock avoidance and prevention algorithms





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LIST OF EXPERIMENTS

Part - A: Operating Systems

Week 1: Basic commands in Linux

(i) File handling utilities

a) cat b) mv c) rm d) cp

(ii) Directory commands

a) mkdir b) cd c) ls d) rmdir

Week 2: Simulate the following CPU Scheduling Algorithms using C.

a) FCFS b) SJF

Week 3: Simulate the following CPU Scheduling Algorithms using C.

a) Priority b) Round Robin

Week 4: Simulate Paging Technique of Memory Management using C.

Week 5: Write a program to implement page replacement algorithms (FIFO, Optimal, and LRU).

Week 6: Write a C program to simulate the following file allocation strategies.

a) Sequential b) Indexed c) Linked

Week 7: Write a program to implement Banker's algorithm for deadlock avoidance.

Part - B: Computer Networks

Week 8: Design and Implement the data link layer framing methods such as character stuffing and bit stuffing.

Week 9: Implementation of Hamming code algorithm

Week 10: Implement CRC technique for any frame using generator polynomial.

Week 11: Implement Dijkstra's algorithm to compute the Shortest path through a graph.

Week 12: Take an example subnet graph with weights indicating delay between nodes. Construct Routing table at each node using Distance Vector Routing Algorithm.

Week 13: Analyze an example subnet of hosts. Construct and simulate broadcast tree for it.

LIST of EQUIEMENT

S.No	Name Of the equipment	Configuration	QTY
1	Desktop	Dell Vostro 3902- Intel® Core TM i3- 4160@3.60GHz, 4GB RAM, 500 GB HDD, Dell 18.5" Led	58
		Acer Intel Pentium Dual Core G2020 2.9 Ghz, 2 GB RAM, 500 GB HDD	6
2	LCD PROJECTOR	Panasonic LX-270 DLP	1
3	D-LINK	24 ports	1
4	Linux	Putty	