



MARRI LAXMAN REDDY INSTITUTE OF TECHNOLOGY AND MANAGEMENT

(AN AUTONOMOUS INSTITUTION)

(Approved by AICTE, New Delhi & Affiliated to JNTUH, Hyderabad)

Accredited by NBA and NAAC with 'A' Grade & Recognized Under Section 2(f) & 12(B) of the UGC act, 1956

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

2050579 OPERATING SYSTEM LAB

B.Tech.III Year-I Sem

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VISION

To empower the students to be technologically adept, innovative, self-motivated and responsible global citizen possessing human values and contribute significantly towards high quality technical education with ever changing world.

MISSION

M1	To offer high-quality education in the computing fields by providing an environment where the knowledge is gained and applied to participate in research, for both students and faculty.
M2	To develop the problem solving skills in the students to be ready to deal with cutting edge technologies of the industry.
M3	To make the students and faculty excel in their professional fields by inculcating the communication skills, leadership skills, team building skills with the organization of various co-curricular and extra-curricular programmes.
M4	To provide the students with theoretical and applied knowledge, and adopt an education approach that promotes lifelong learning and ethical growth.

LIST OF EXPERIMENTS

1. Write C programs to simulate the following CPU Scheduling algorithms
a) FCFS b) SJF c) Round Robin d) priority
2. Write programs using the I/O system calls of UNIX/LINUX operating system (open, read, write, close, fcntl, seek, stat, opendir, readdir)
3. Write a C program to simulate Bankers Algorithm for Deadlock Avoidance and Prevention.
4. Write a C program to implement the Producer – Consumer problem using semaphores using UNIX/LINUX system calls.
5. Write C programs to illustrate the following IPC mechanisms
a) Pipes b) FIFOs c) Message Queues d) Shared Memory
6. Write C programs to simulate the following memory management techniques
a) Paging b) Segmentation



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COURSE OUTCOMES

CO Course Outcome

- C317.1 Understand the design aspects of operating system concepts through simulation.
- C317.2 Use basic Unix commands, system call interface for process management.
- C317.3 Implement interprocess communication and I/O in UNIX and implement operating system concepts such as scheduling, deadlock management.
- C317.4 Simulate and implement operating system file management and memory management.
- C317.5 Implement C programs using UNIX system calls.

PROGRAM EDUCATIONAL OBJECTIVES

PEO1	To induce strong foundation in mathematical and core concepts, which enable them to participate in research, in the field of computer science.
PEO2	To be able to become the part of application development and problem solving by learning the computer programming methods, of the industry and related domains.
PEO3	To gain the multidisciplinary knowledge by understanding the scope of association of computer science engineering discipline with other engineering disciplines.
PEO4	To improve the communication skills, soft skills, organizing skills which build the professional qualities, there by understanding the social responsibilities and ethical attitude.

PROGRAM SPECIFIC OUTCOMES

PSO1- APPLICATIONS OF COMPUTING:

Ability to use knowledge in various domains to provide solution to new ideas and innovations.

PSO2- PROGRAMMING SKILLS:

Identify required data structures, design suitable algorithms, develop and maintain software for real world problems.

PSO3-EXECUTIVE SKILLS:

Make use of computational and experimental tools for creating innovative career paths, to be an entrepreneur and desire for higher studies.



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Do's & Don'ts

- Switch off the power and unplug equipment before performing service.
- Know where the fire extinguisher is located and how to use it.
- Report fires or accidents to your lecturer/laboratory technician immediately.
- Avoid food and drinks from your workspace.
- Systems operate under normal room temperature.
- Computer lab room's floor should be clean, dry and dust free.
- No one is allowed to delete information from the computer.
- Enter the computer lab quietly and work quietly.
- Do not change computer settings or backgrounds.
- Don't plug in external devices without scanning for computer viruses.
- SAVE all unfinished work to a cloud drive or jump drive.