s A red sign with white text

AI-generated content may be incorrect.

**Texas College of Management & IT**

**Bachelor of Information Technology (BIT**)

**Project Title:**

**Submitted By:**

Name: Anuraj Gautam

LCID: LC00017003334

Semester: 2nd Semester, 1st year

**Submitted To:**

Instructor Name: Saroj Ghimire

Course: Operating System (BIT)

Date of Submission :2025/07/

Texas College of Management &IT, Kathmandu

Table of Contents

1. Introduction …………………………………………………………….
2. Objects ………………………………………………………………….

Introduction

The Operating System is the backbone of any computing environment. It manages hardware resources, provides essential services to applications software, and ensures efficient and secure system performance. Understanding operating systems is crucial for IT professionals because it forms the foundation for troubleshooting, software development, system administration and cybersecurity. This knowledge aligns with course outcomes such as mastering process and memory management, understanding scheduling algorithms all of which are essential in real world IT roles.

Objects

1. Understand the evolution and role of OS.
2. Apply different CPU scheduling algorithms and evaluate their efficiency.
3. Analyze and solve deadlock scenarios using strategies.
4. Simulate page replacement techniques such as LRU.
5. Compare real world OS in terms of internal design and performance.

Section A

Operating System Overview

Operating System have evolved from simple batch processing system to multiprogramming and multitasking environment.

Early system ran one jab at time using push card batch systems.

With multiprogramming, the CPU is kept busy by managing jobs in memory.

In multitasking, users can run multiple programs concurrently, increasing efficiency.