Name: Abhay Yadav
Romm: 241000001

Experiment 2: Problem Definition & Feasibility Study

Aim: To analyse the feasibility of the Online Examination Management System

Tasks:
1. Define problem statement, identify constraints and assumptions, and perform feasibility analysis.

Deliverable: Feasibility Study Report

Problem Statement: Prepare a feasibility study report for the selected system, considering technical, economic, and operational aspects.

Problem Statement Definition:
The current examination process in our Colleges is largely manual and paper-based, causing issues such as high printing and invigilation costs, delays in result processing, risk of paper loss, and difficulties in scheduling and managing multiple exams and rooms. The proposed Online Examination Management System aims to digitise key examination activities like question paper management, secure test delivery, automatic evaluation of objective questions, and result generation, thereby improving efficiency, reducing errors, and enabling secure remote or lab-based examinations. This feasibility study evaluates the technical, economic, and operational viability of implementing such an online system in the institutions.

Introduction
In the context of College, where manual examinations for 1,000+ students per semester involve significant printing costs, staff workload, and result delays, the global shift to OEMS offers compelling benefits. Studies show OEMS cuts costs by up to 64%, accelerates results 10x faster, and scales capacity 3x without added resources, making it highly relevant for Indian higher education amid a market growing at 19.8% CAGR in the region. This feasibility study evaluates implementing such a system, focusing on technical, economic, and operational viability.

Objectives of the Proposed System

1. **Reduce Manual Work**
2. **Speed up result generation**
3. **Automate the process**
4. **Reduce Paperwork and Maintain Digital Records**
5. **Increase Speed**
6. **Make the Examination System Easy and Fast**

Name: Abhay Yadav
Romm: 241000001

Scope of the System

Make an Online system that can take and evaluate quizzes and assignments, and evaluate them automatically based on set parameters.

Assumptions and Constraints

- **Assumptions**
  - All students have access to computers
  - College has a stable network and power supply
  - Faculty can adopt the system
- **Constraints**
  - Budget for Servers
  - Limited number of computers
  - Data Privacy
  - Exam Malpractice Concerns

Feasibility Analysis

Technical feasibility

- Available infrastructure: computer labs, network, servers, and backup.

- Technology options: web-based system, browser-based tests, database like MySQL/Oracle.

- Conclusion: Technically feasible because existing labs and networks can support the OEMS.
- Skills: College IT team (3 staff) + student developers for maintenance

Economic feasibility

- Costs: hardware, software licences, development, maintenance, training.

- Benefits: saving on printing and paper, fewer invigilators, faster result processing, and less physical storage.

- Conclusion: Though an initial investment is required, yearly savings from reduced printing and manual work make it economically feasible.

Operational feasibility

- ○ Students already using a few Similar Platforma like google classroom amd moodle

- ○ In our college, there is a significant weight of Internal Assessment. This system can revolutionise this and make it easier work Faculty to Assess Studets.

- ○ The Interface will be similar to the existing Platforms used.

- ○ Conclusion: With proper training and pilot runs, the system is operationally feasible and can be integrated into current exam workflows.

The OEMS is technically, economically, and operationally feasible for our college, with break-even in 18 months and 64% cost savings long-term.