## 1. Project Description:

The proposed system is an online management assistance (MA) platform for the Computer Engineering Department. It aims to provide role-based access to students, lecturers, and management assistants to facilitate academic and administrative tasks. The system will include functionalities such as feedback management, attendance tracking, notice updates, and cash handling. The automated system administrator will process feedback calculations to aid in decision-making. The system will streamline departmental operations and improve accessibility through a centralized digital interface.

## 2. System Vision:

The vision of this system is to create an efficient, user-friendly, and secure platform that supports the administrative and academic needs of the Computer Engineering Department. By automating key processes like attendance tracking, feedback collection, and financial management, the system aims to enhance operational efficiency and provide a seamless experience for students, lecturers, and management assistants.

## 3. Stakeholders:

- **Students:** Provide feedback, view notices, and access attendance records.
- **Lecturers:** View feedback results, access attendance records, and receive financial claims.
- **Management Assistants (MA):** Manage attendance, create feedback forms, update notices, and handle cash-related processes.
- **System Administrator (Automated Program):** Process feedback calculations and generate reports for MA and lecturers.
- **Department Head:** Oversee system functionality and ensure compliance with academic policies.

## 4. Objectives:

1. **Streamline Department Operations** - Provide a centralized platform for attendance marking, notice updates, and feedback collection.
2. **Enhance User Experience** - Offer role-based access with intuitive navigation for different stakeholders.
3. **Improve Feedback Management** - Automate feedback collection, calculation, and visualization through progress bars and average ratings.
4. **Facilitate Attendance Tracking** - Enable MAs to mark attendance and allow lecturers to view and download attendance sheets.
5. **Enable Secure Financial Transactions** - Implement a cash-handling module for MAs to manage exam claims and allowances.
6. **Ensure Data Security and Accessibility** - Allow users to update profile details and securely log in with password-protected authentication.

# 5. Functional Requirements

- **User Authentication & Role-Based Access:**

Users (MA, Lecturer, Student) must sign up and log in.System verifies credentials and directs users to their respective dashboards.

- **Dashboard & Navigation:**

Each user role has a customized sidebar with relevant features.

MA, Lecturer, and Student dashboards display different options.

- **Feedback System:**

Students can submit feedback by selecting courses and lecturers.

Lecturers can view feedback as average ratings and progress bars.

MA can create feedback forms, set deadlines, and manage feedback submissions.

System Admin automatically calculates feedback ratings.

- **Attendance Management:**

MA can create attendance sheets for specific courses, lecturers, dates, and time slots.

MA can mark and submit attendance, with an option to download records.

Lecturers can view attendance records filtered by course and time slot.

- **Notices & Announcements:**

MA can post and update notices visible to Lecturers and Students.

Notices appear in the relevant sections of user dashboards.

- **User Profile Management:**

Users can update their profile picture, username, and password.

- **Cash Handling & Exam Claim Management:**

MA manages exam claim forms and updates status (In/Out).

- **System Admin Role:**

Automatically processes and calculates feedback ratings for MA and Lecturers.

- **Logout Functionality:**

All users can securely log out from their accounts.

# 6.Non-Functional Requirements

**Security:**

Secure authentication and data encryption.

Role-based access to prevent unauthorized actions.

**Usability:**

Intuitive and user-friendly interface.

Responsive design for accessibility on various devices.

**Performance:**

Fast and efficient database queries.

Quick loading time for feedback and attendance pages.

**Scalability:**

The system should handle an increasing number of users efficiently.

**Reliability:**

Ensures data integrity and accuracy, particularly in attendance and feedback records.

**Maintainability:**

Well-structured codebase for easy updates and debugging.

**Availability:**

The system should be available 24/7 with minimal downtime.

**Data Backup & Recovery:**

Regular backups to prevent data loss.

## 7. User Roles and Requirements:

- **Management Assistant (MA):**
  - Create and distribute feedback forms with submission deadlines.
  - Update notices accessible to students and lecturers.
  - Mark attendance for students based on course codes and time slots.
  - Handle exam claims by managing allowance forms and their status.
  - View feedback reports calculated by the system admin.
- **Lecturer:**
  - Access student feedback specific to their subjects.
  - View attendance records for their courses.
  - Download attendance reports if needed.
  - Receive financial allowance updates from MA.
- **Student:**
  - Provide feedback on courses and lecturers.
  - Access department notices.
  - View attendance records for their registered courses.
- **System Administrator (Automated System):**
  - Process and calculate feedback ratings.
  - Generate feedback results for MAs and lecturers.