



Web Technologies 213

Attendance Management Lab Description

The Attendance Manager is a web-based system designed to streamline how class attendance is recorded and accessed. The project simulates a real-world application that involves multiple user roles and responsibilities:

- **Faculty Interns (FIs)** create attendance sessions and mark attendance for students during those sessions.
- **Students** log in to view their own attendance history and track participation across different dates and classes.

By working through this project in stages, students will practice key skills such as:

- Designing and creating relational databases.
- Implementing secure user authentication and role-based access control.
- Building CRUD (Create, Read, Update, Delete) functionality for managing users and attendance.
- Using SQL queries for generating reports and summaries.
- Enhancing usability with client-side interactivity and responsive design.

At the end of the semester, each student will have developed a complete, functional system that integrates all the core concepts of web technologies into a cohesive project.

Key System Features

1) User account creation for all roles - Faculty Intern, Student.

2) Faculty Interns can:

- create courses
- add students to courses
- Create and manage class sessions.
- Mark attendance
- approve pending student requests to join courses.

3) Students can:

- Join a course (pending FI approval).
- Mark attendance using a code.
- View daily and course attendance reports.

4) Main Web Pages:

- Login/Sign Up Page
- Teacher Dashboard (manage courses, add FIs, view reports)
- FI Dashboard (sessions, approve students, attendance, reports)
- Student Dashboard (join courses, mark attendance, view reports)

5) Suggested Database Tables:

- Users: userID, name, email, role, password
- Courses: courseID, name, teacherID
- FacultyInterns: fiID, courseID
- Students: studentID, courseID, status (pending/approved)
- Sessions: sessionID, courseID, date, code
- Attendance: attendanceID, sessionID, studentID, status (present/absent)