

CONCEPT & PRINCIPLES OF CYBERSECURITY



2024

CS 232

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"On my honor, as student of Ghulam Ishaq Khan Institute of Engineering Sciences and Technology, I have neither given nor received unauthorized assistance on this academic work."

Submitted to:

Assistant Professor Sir Musadiq Mansoor

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Attendance App Description

The Attendance App is a web-based application designed to streamline the process of taking and managing attendance for courses. The application is hosted locally, allowing instructors to securely access and manage attendance data within their network.

Features:

1. Instructor Login:

- Instructors log into the app using their credentials.
- Upon successful login, they are directed to their personalized dashboard.

2. Course Selection:

- The dashboard displays a list of courses assigned to the instructor.
- Instructors can select a specific course to manage attendance.

3. Attendance Marking:

- Once a course is selected, the instructor is presented with a list of enrolled students.
- The instructor can mark each student as "Present" or "Absent" for the session.
- The attendance data is saved in the database immediately after submission.

4. Attendance Report Generation:

- Instructors can generate a report of the attendance for any course.
- The report can be downloaded as an Excel sheet (.xlsx), providing detailed records of student attendance over a specified period.
- The report includes information such as student names, dates of attendance, and overall attendance percentages.

5. Database Structure:

The application uses a database with several tables:

- **Instructors:** Stores details about the instructors, including login credentials and personal information.
- **Courses:** Contains information about the courses, including course name, code, and the instructor assigned.
- **Students:** Stores student details, including enrollment information.
- **Attendance Records:** Maintains records of attendance, linking students to courses and sessions.
- **Faculty Details:** This table holds additional information about the faculty members, such as their department, contact information, and assigned courses.

6. Additional Functionalities:

The app can be expanded to include additional features, such as:

- **Email Notifications:** Send notifications to students who are frequently absent.
- **Analytics Dashboard:** Provide visual summaries of attendance data over time.
- **Customizable Reports:** Allow instructors to customize the format and content of the attendance reports.

Technical Overview:

- **Backend:** The application is built using a backend framework (such as Node.js and Ajax files) to handle requests and interact with the database.
- **Database:** A relational database (PHP myAdmin using PDO) is used to store and manage data.
- **Frontend:** The user interface is created using HTML, CSS, and JavaScript, ensuring a user-friendly experience.
- **Hosting:** The app runs on a local server, making it accessible via the local network. This setup ensures data security and privacy.

This Attendance App simplifies the process of managing student attendance, providing instructors with a reliable and efficient tool to track and report attendance.