Project Proposal

Project Title: Attendance Management System QR Code Analysis

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Problem Statement:

This project aims to develop a QR Code Based Attendance Management System for a class of 35 students. The system will allow the teacher to generate a QR code for each class session, and students will scan the QR code using their smartphones to mark their attendance. The attendance data will be automatically stored in a database.

- **Objective**
- This system will be designed for one class consisting of 35 students.
- The system will include:
- Admin login system
- Student login system
- QR code generation
- QR code scanning for attendance
- Daily and monthly attendance reports
- Attendance percentage calculation
- Excel export option

Stakeholders & Users

Admin Panel

- Secure login
- Add/Edit/Delete students
- Generate time-limited QR code (valid for 5 minutes)
- View daily/monthly attendance reports
- View attendance percentage

Student Panel

- Secure login
- Scan QR code to mark attendance
- View personal attendance history

Non-Functional Requirements

- Performance: Quick attendance recording (within a few seconds).
- Security: Authentication, time-limited QR codes, single entry per session.
- Usability: Simple and user-friendly interface.
- Reliability: Accurate data storage and report generation.

10. Feasibility Analysis

- Technical Feasibility: Implementable using PHP, MySQL, and XAMPP.
- Economic Feasibility: Low cost due to open-source tools.
- Operational Feasibility: Easy to operate for teachers and students.

Software Requirements:

- XAMPP (Local Server)
- PHP
- MySQL Database
- HTML, CSS, Bootstrap
- JavaScript

Database Design

Students Table

- id
- name
- student_id
- department
- Password
- Present
- Absent
- Leave
- Casual leave
- Date and time

Attendance Table

- id
- student_id
- date
- time
- Status

System Workflow

1. Admin logs into the system.
2. Admin generates a QR code for the class session.
3. Students log in and scan the QR code.
4. Attendance is automatically recorded in the database.
5. Admin can view and download attendance reports.

Security Features

- User authentication required
- Time-limited QR code (5 minutes validity)
- One attendance entry per student per session
- Secure database storage