Here is the revised project report summary, anonymized to exclude student and institution names as requested. You can copy this text to generate your PDF.

Project Report: Student Attendance Management System

1. Introduction

The **Student Attendance Management System** is a software application designed to maintain student attendance on a daily basis. It serves as a digital replacement for traditional manual tracking methods, such as paper-based registers, which are often time-consuming, error-prone, and susceptible to manipulation like proxy attendance. The system is designed to assist teaching staff in marking attendance for the subjects they handle, ensuring data accuracy and real-time accessibility.

2. Problem Statement and Objectives

Problem Statement: Existing manual systems rely on handwritten registers, making record maintenance a tedious job requiring significant human effort. Retrieval of information from these physical records is difficult, and the process is vulnerable to data loss or manipulation.

Objectives:

- To automate the attendance process and reduce manual errors.
- To generate accurate reports based on student attendance.
- To assist in evaluating student eligibility criteria based on attendance records.
- To provide specific login credentials for staff based on their subjects.

3. Technical Specifications

The system is built using web technologies and requires specific hardware configurations for optimal performance.

Software Requirements

- **Front End:** HTML, CSS
- **Back End:** PHP
- **Database:** PostgreSQL
- **Web Browsers:** Google Chrome, Mozilla Firefox
- **Operating System:** Linux or Windows

Hardware Requirements

- **Processor:** Core i5 processor
- **RAM:** 8GB
- **Storage:** 512GB SSD Hard Disk

4. System Design and Modules

The application is structured around three primary user roles, each with specific permissions and database entities.

User Modules

1. **Admin:**
    - Responsible for managing the overall system, including adding teachers and students.
    - Database attributes include Admin ID, Username, and Password.
2. **Class Teacher:**
    - Responsible for registering, logging in, taking attendance, and searching attendance records.
    - Database attributes include Teacher ID, Name, Username, and Password.
3. **Student:**
    - Students can view their details and attendance status.
    - Database attributes include Student ID, Name, Roll Number, and Class.

Database Implementation

The system uses a relational database model. The **Attendance** table links students and teachers, recording the date and attendance status (Present/Absent) . The backend connection is handled via PHP Data Objects (PDO) to ensure secure communication with the PostgreSQL database.

5. Advantages

- **Reduces Manual Work:** Automates the process, eliminating the need for physical registers.
- **Time Efficiency:** Allows staff to focus on teaching rather than administrative tasks.
- **Cost Reduction:** Saves costs associated with manual labor and paper-based record-keeping.
- **Reliability:** reduces the risk of "proxy" attendance and calculation errors.

6. Future Scope and Enhancements

The project is designed with flexibility for future upgrades:

- **Mobile Application:** Transitioning the system into a mobile app for better mobility.
- **Biometric Integration:** Implementing AI-powered facial recognition for automatic attendance marking.
- **Hardware Integration:** Using Barcode Readers or Smart Cards (NFC) for rapid logging of student data.
- **Location Tracking:** Utilizing GPS-based location verification for marking attendance.