# FACE- RECOGNITION ATTENDANCE SYSTEM

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BTECH CSE CYBER SECURITY

3RD YEAR

# INDEX

# AIM

To develop a **web-based attendance system** that uses **real-time face recognition** to automate student attendance, improve efficiency, ensure accuracy, and minimize the chances of proxy attendance in educational institutions.

# INTRODUCTION

Traditional attendance systems are often time-consuming, error-prone, and susceptible to proxy attendance. The Face Recognition Attendance System addresses these issues by leveraging real-time facial recognition technology through a webcam.

This system is built using **HTML, CSS, JavaScript (Face-API.js)** on the frontend and **PHP with MySQL** on the backend. It supports role-based access for **Admins** and **Lecturers**, allowing seamless student registration, course management, and attendance marking. The system is deployed locally using **XAMPP** for easy testing and development.

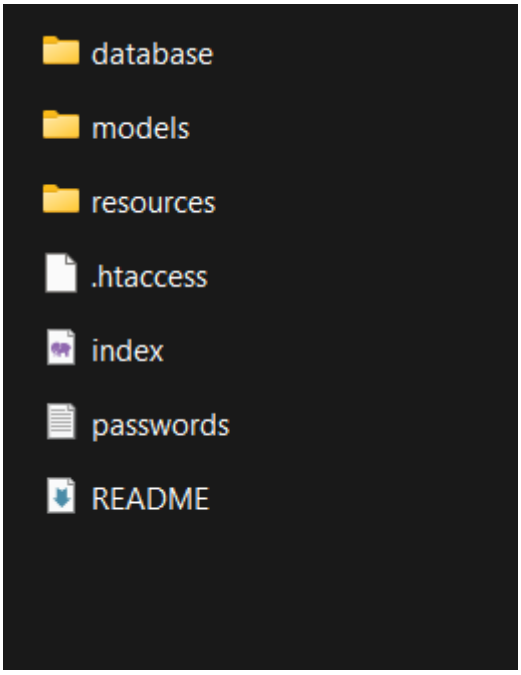
# METHOLODOGY

The project was developed using the following methodology:

1. Requirement Analysis:
    - Identified the need for an automated, reliable attendance system.
    - Decided on role-based access control: Admin vs Lecturer.
2. Technology Stack:
    - Frontend: HTML, CSS, JavaScript
    - Facial Recognition: Face-API.js (runs in-browser)
    - Backend: PHP
    - Database: MySQL (via phpMyAdmin)
    - Server: XAMPP (Apache server + MySQL)
3. Modules Implemented:
    - Login System: Role-based login for Admin and Lecturer.
    - Admin Dashboard:
        - Add new students with image capture for recognition.
        - Manage courses, venues, and lectures.
        - Export attendance as Excel files.
    - Lecturer Panel:
        - Open camera and mark attendance based on face detection.
    - Face Recognition:
        - Face-API.js loads trained face descriptors.
        - Matches live webcam input with registered faces.
4. Testing & Deployment:
    - Hosted and tested on XAMPP.
    - Verified live camera access and successful recognition.
    - Ensured Excel exports and database logging work correctly.

# CODE

These are the files required. The codes are provided in the GitHub.

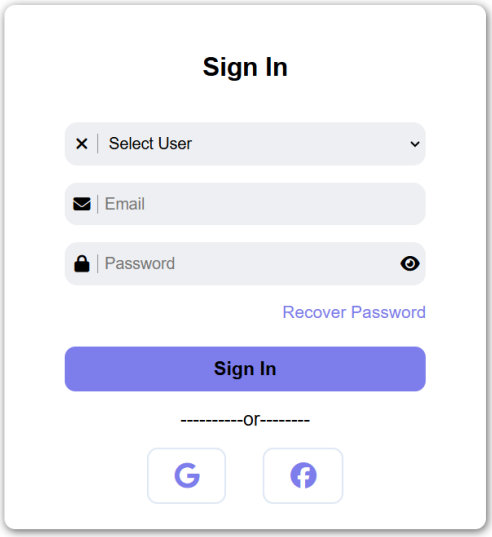


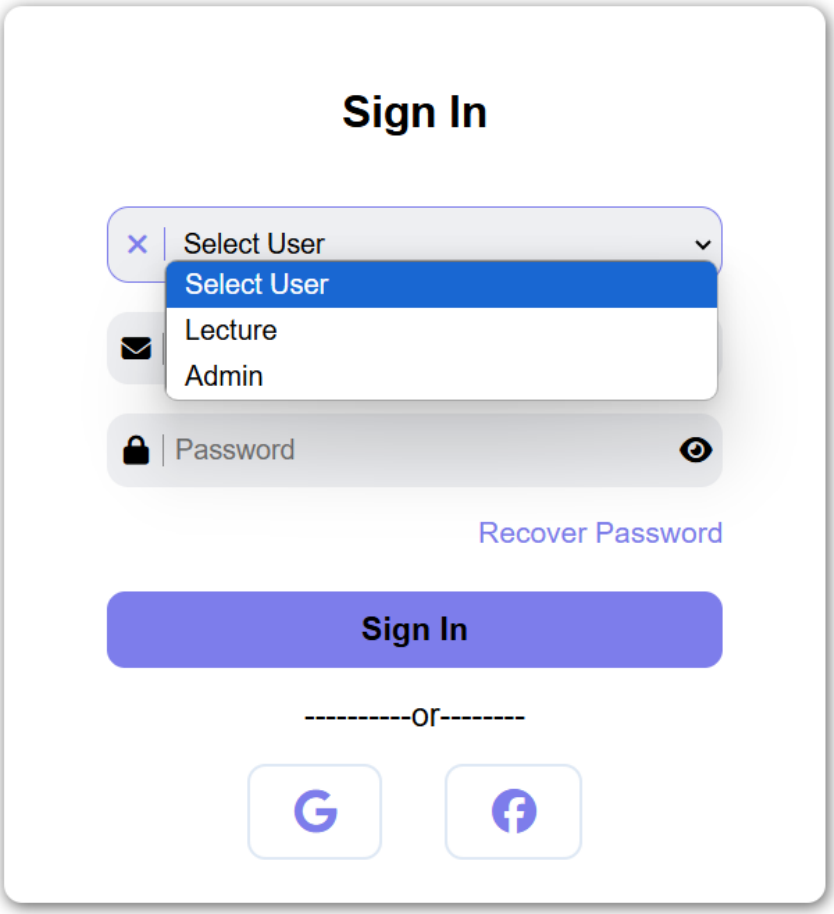
# RESULT AND TESTING

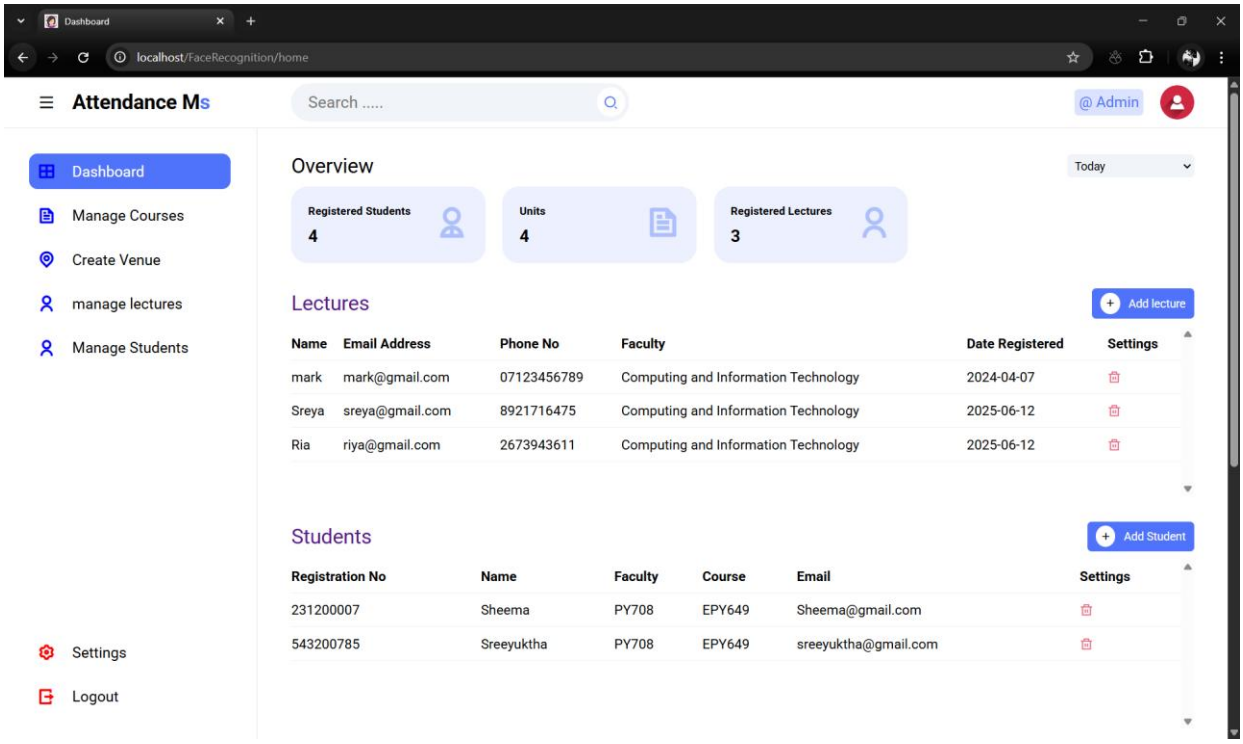
The system functions successfully, with the following outcomes:

- Real-time facial recognition is accurate and fast under normal lighting conditions.
- Attendance is logged automatically when a student's face is detected.
- Admins can easily manage students, courses, and lectures.
- Lecturers can mark attendance without needing access to other system features.
- Attendance data can be exported to Excel, facilitating report generation.

Screenshots verify the system's successful implementation, including login, registration, and real-time webcam-based recognition.




Sign In
Select User
Select User
Lecture
Admin
Password
Recover Password
Sign In
----------or--------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localhost/FaceRecognition/home
Attendance Ms
Search .....
@ Admin
Dashboard
Manage Courses
Create Venue
manage lectures
Manage Students
Settings
Logout
Overview
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4
Units
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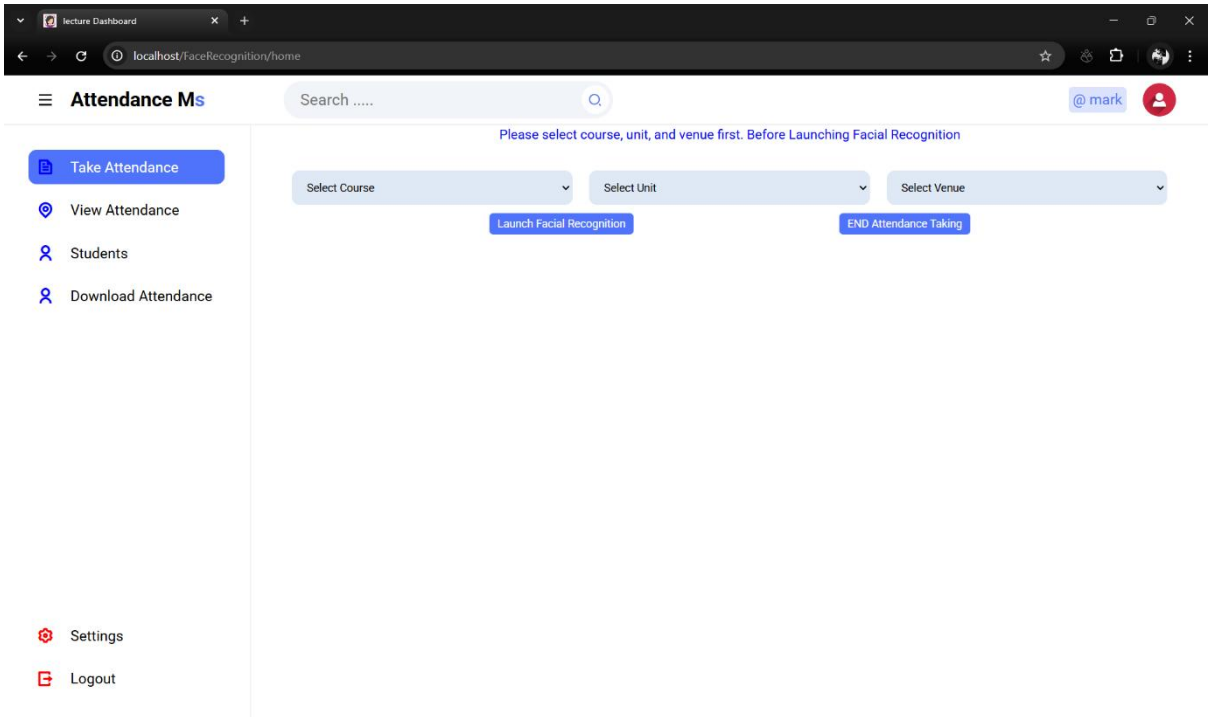
mark mark@gmail.com 07123456789 Computing and Information Technology 2024-04-07
Sreya sreya@gmail.com 8921716475 Computing and Information Technology 2025-06-12
Ria riya@gmail.com 2673943611 Computing and Information Technology 2025-06-12
Students
Add Student
Registration No Name Faculty Course Email Settings
231200007 Sheema PY708 EPY649 Sheema@gmail.com
543200785 Sreeyuktha PY708 EPY649 sreeyuktha@gmail.com


lecture Dashboard
localhost/FaceRecognition/home
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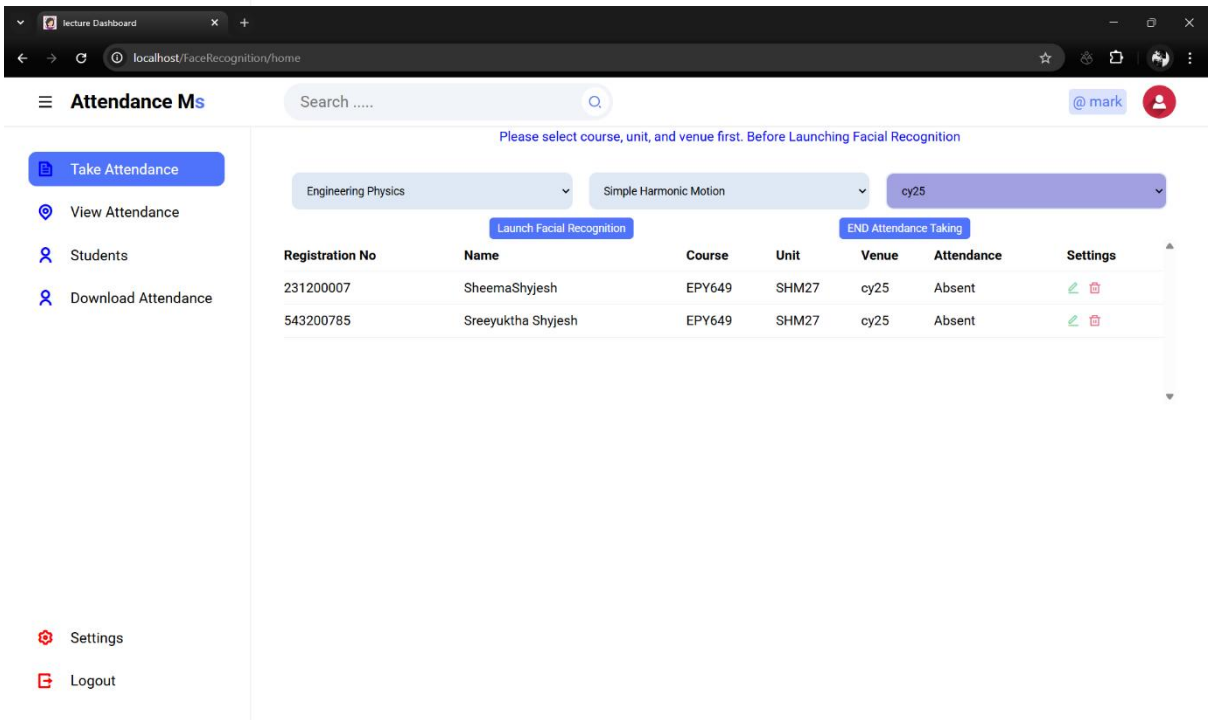
View Attendance
Students
Download Attendance
Select Course
Select Unit
Select Venue
Launch Facial Recognition
END Attendance Taking
Settings
Logout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Engineering Physics
Simple Harmonic Motion
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Name
Course
Unit
Venue
Attendance
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SheemaShyjesh
EPY649
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543200785
Sreeyuktha Shyjesh
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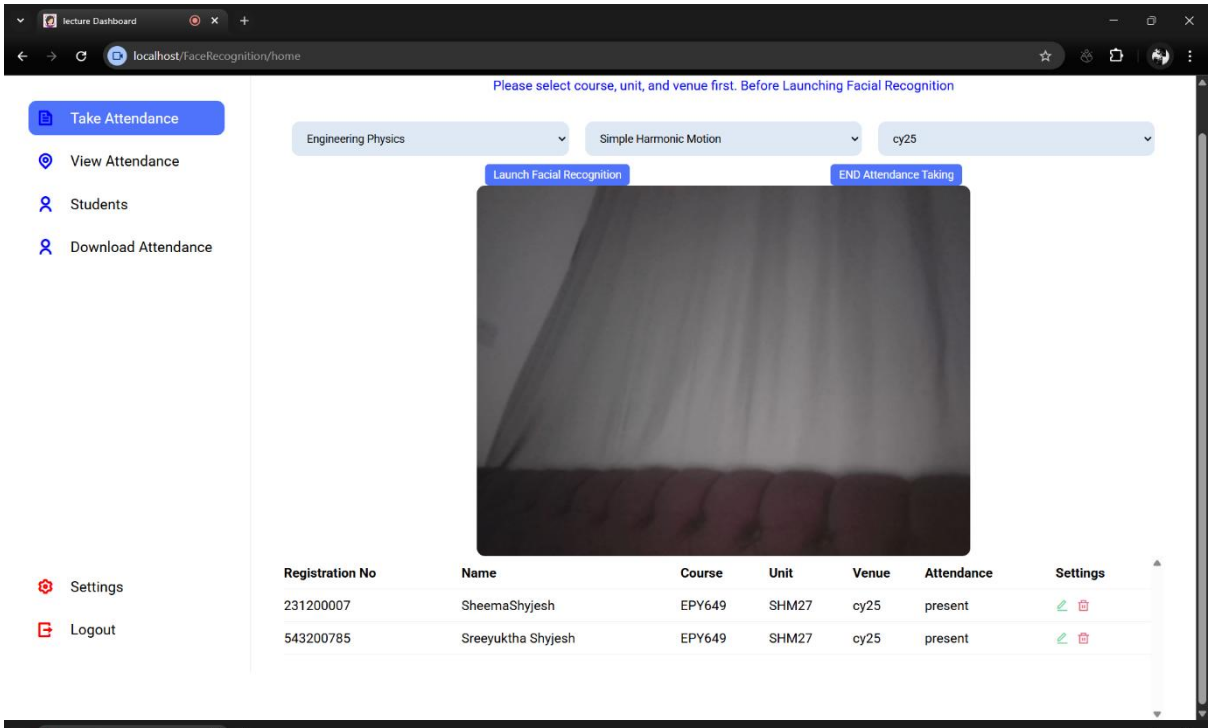
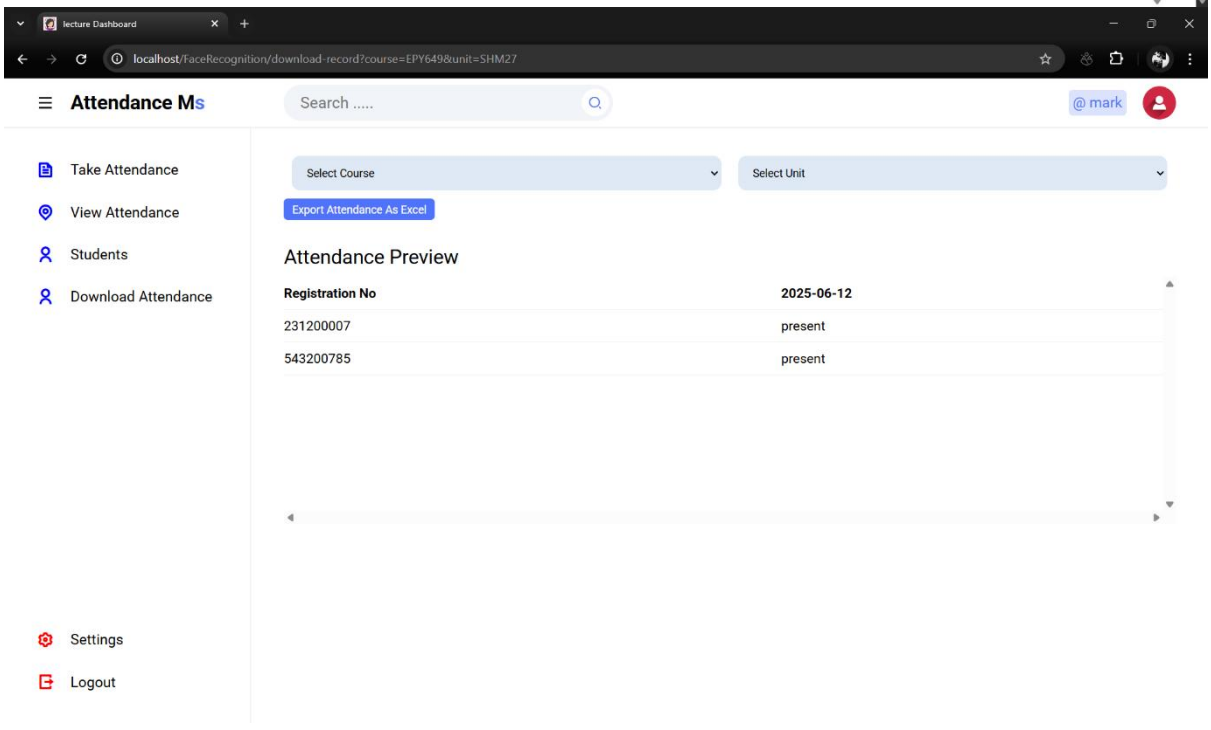
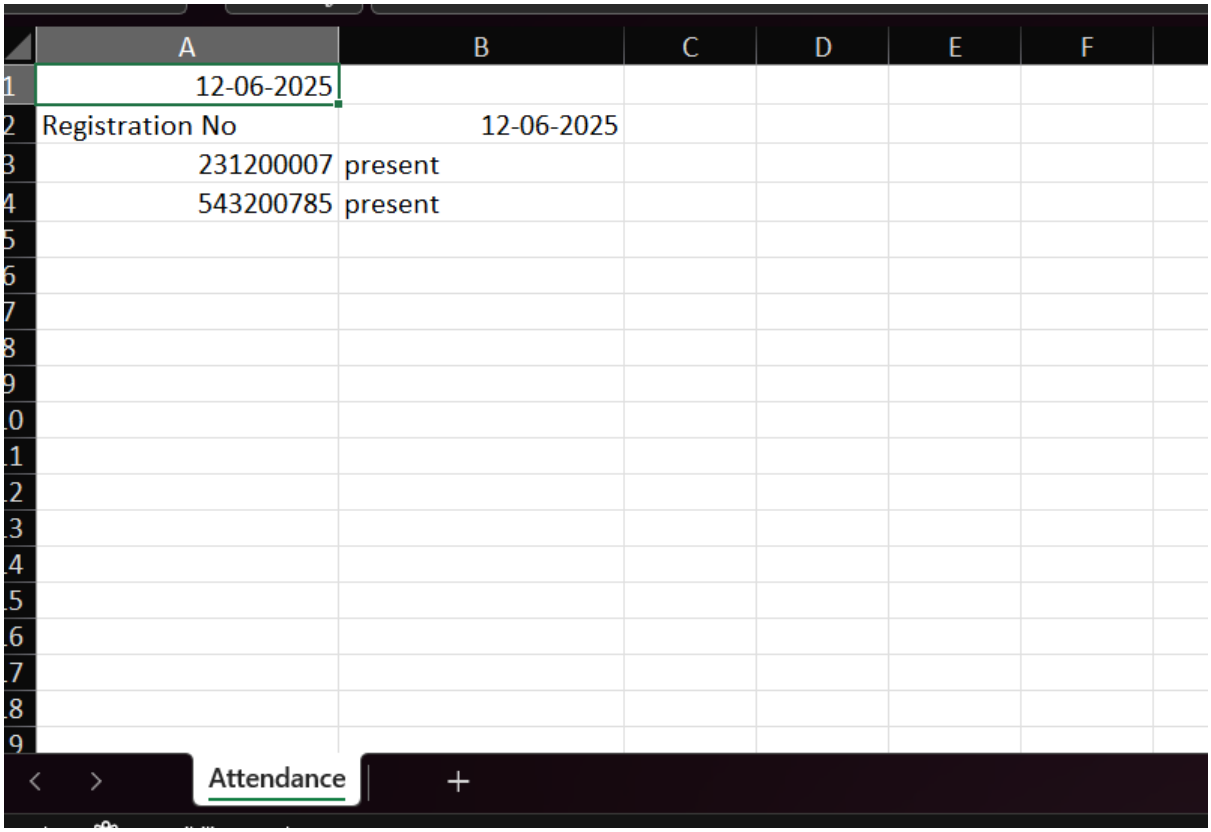
Absent
Settings
Logout




DOWNLOADED EXCEL SHEET WITH ATTENDANCE MARKED.



| | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| 1 | 12-06-2025 | | | | | |
| 2 | Registration No | 12-06-2025 | | | | |
| 3 | 231200007 | present | | | | |
| 4 | 543200785 | present | | | | |
| 5 | | | | | | |
| 6 | | | | | | |
| 7 | | | | | | |
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| 18 | | | | | | |
| 19 | | | | | | |

Attendance

# CONCLUSION

The Face Recognition Attendance System offers a modern and secure alternative to manual attendance methods. By utilizing web technologies and real-time face detection, the system ensures accurate attendance recording while saving time and reducing administrative overhead.

Its modular design and use of open-source tools make it a scalable solution for educational institutions looking to modernize their attendance process.