

# Smart Attendance System - User Manual

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## 1: Introduction

The Smart Attendance System leverages facial recognition technology to provide an automated, efficient attendance tracking solution. This user manual guides users through system functionalities, set-up procedures, and operational guidelines.

## 2: System Requirements and Installation

### 2.1: Installing Python 3.9

- Ensure Python 3.9 is installed on your system. Download it from [Python's official website](#).
- Follow the installation instructions, making sure to add Python to your system's PATH.

### 2.2: Setting Up Virtualenv

- Install Virtualenv to create isolated Python environments. Use the command `pip install virtualenv`.
- Create a new environment for the project: `virtualenv venv`.
- Activate the environment:
  - Windows: `venv\Scripts\activate`
  - macOS/Linux: `source venv/bin/activate`

### 2.3: Installing OpenCV and Face Recognition Libraries

- With the virtual environment activated, install OpenCV using `pip install opencv-python`.
- Install the face recognition library using `pip install face_recognition`.

### 2.4: CMake and Dlib Setup

- Download and install CMake from [CMake's official website](#), ensuring it's added to the PATH.
- Dlib installation: Run `pip install dlib`.
  - Note: Dlib requires CMake for installation. Ensure CMake is installed and configured correctly before installing dlib.
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## 3: Getting Started

Access the Smart Attendance System through a compatible web browser. Ensure that your device has a functional camera for facial recognition features.

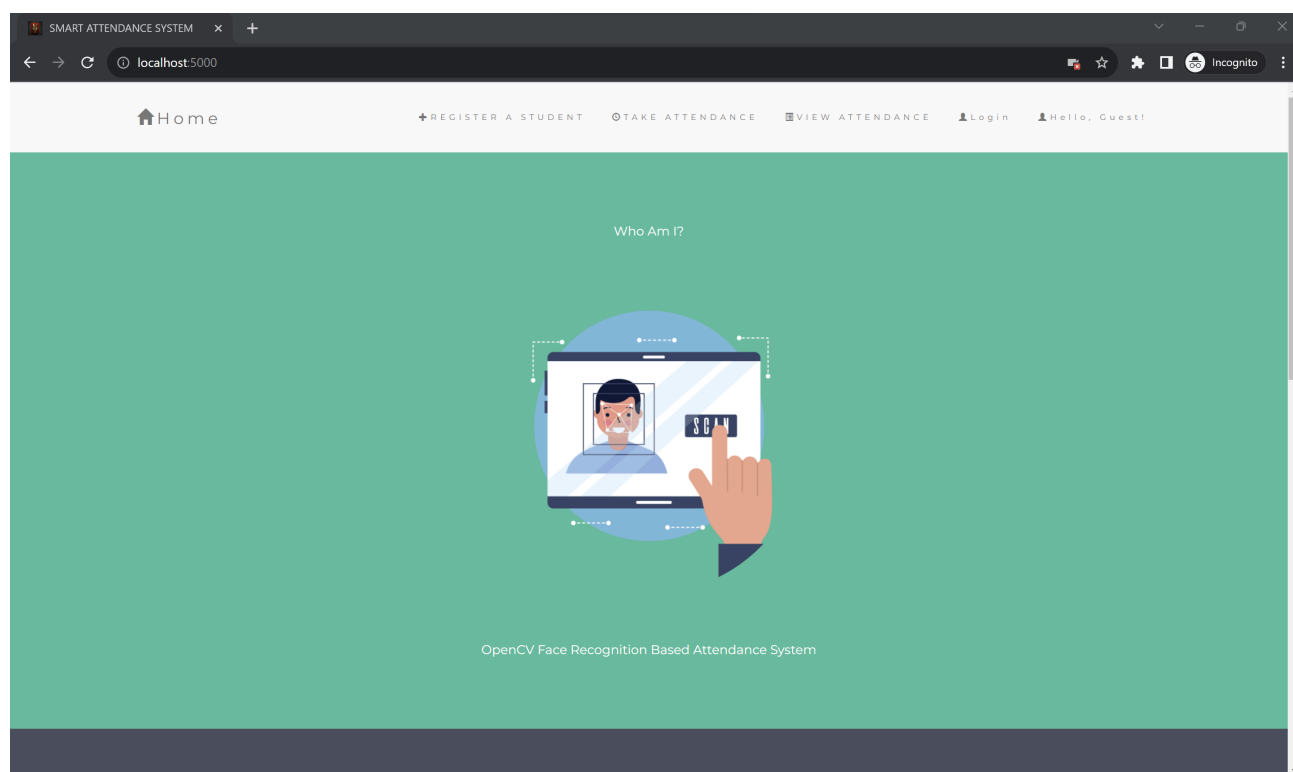
### Running the Flask App

- Navigate to the project directory in the terminal or command prompt.
- Ensure the virtual environment is activated.
- Run the Flask application using `flask run` or `python run.py`.
- Access the application through a web browser at the address provided in the terminal (usually `http://127.0.0.1:5000/`).

## 4: System Pages

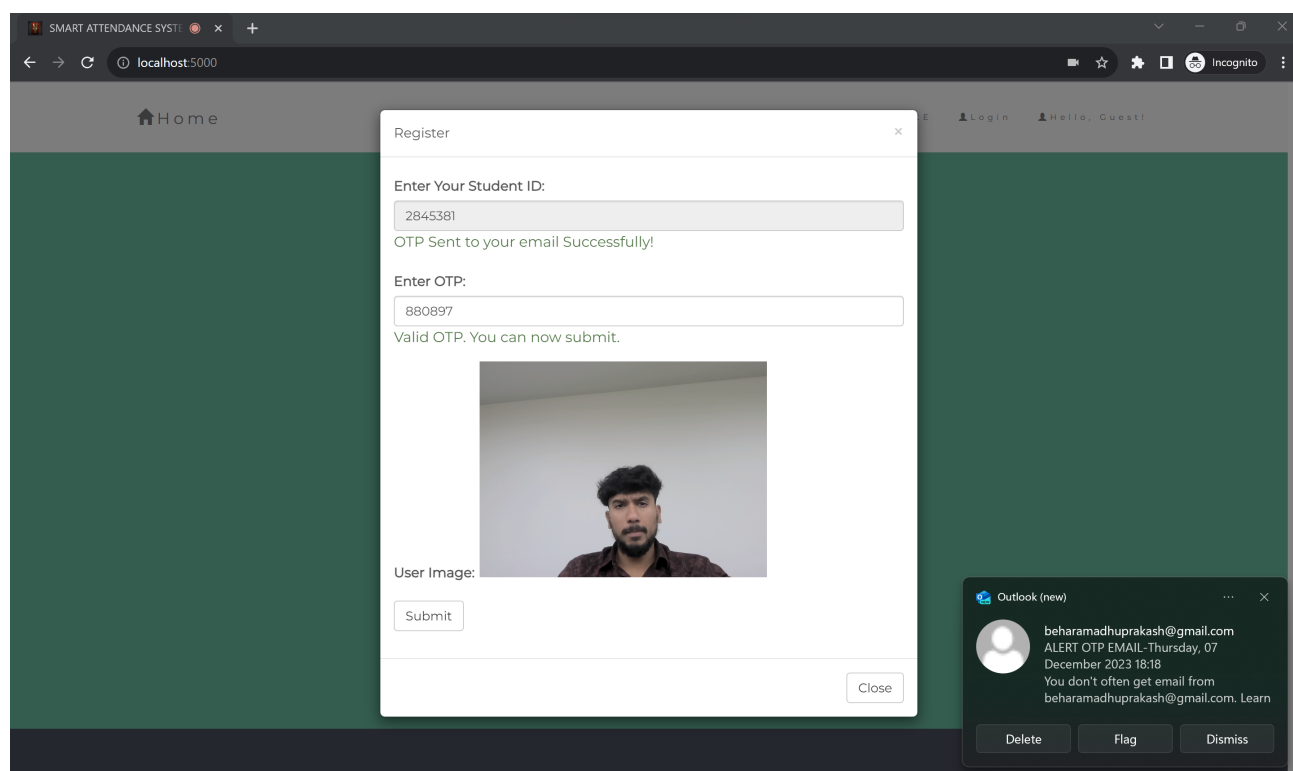
### 4.1: Home Page

The landing page provides navigation to all key areas of the system.



## 4.2: Registration Page

Students can register their profile and facial image for attendance tracking.

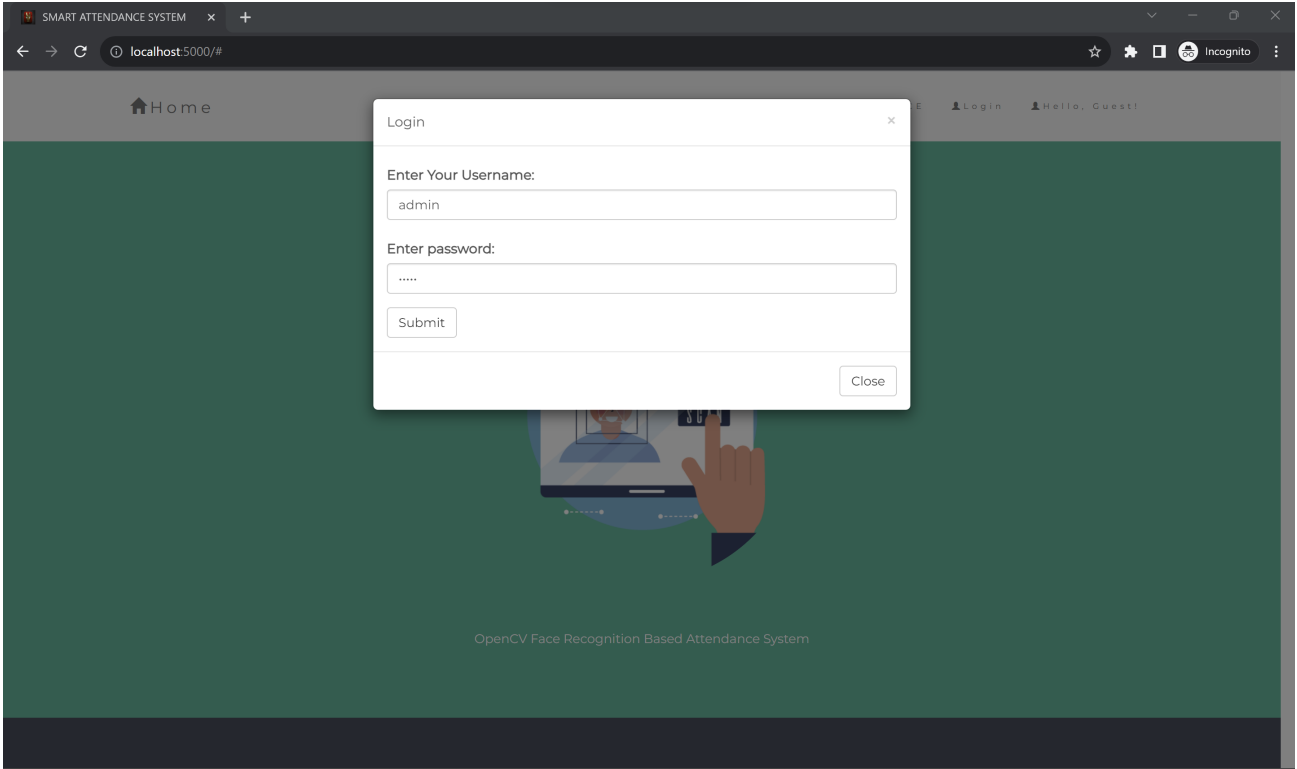


## 4.3: Attendance Page

Automatically marks attendance for registered students via facial recognition.

4.4: Admin Dashboard

Administrators can access comprehensive attendance records and manage student data.



SMART ATTENDANCE SYSTEM

localhost:5000

Close Attendance Windows

Class Attendance

Show 10 entries

Search:

ID	Name	Major	Starting Year	Total Attendance	Year	Last Attendance Time	Edit
2837016	Sai Rohith Avula	SE	2021	3	1	2023-12-07 16:58:18	Edit
2845381	Madhu Prakash	CSE	2021	8	4	2023-12-07 18:21:30	Edit
2860024	Indra Prasanth	SE	2022	0	1	2022-12-11 00:54:34	Edit

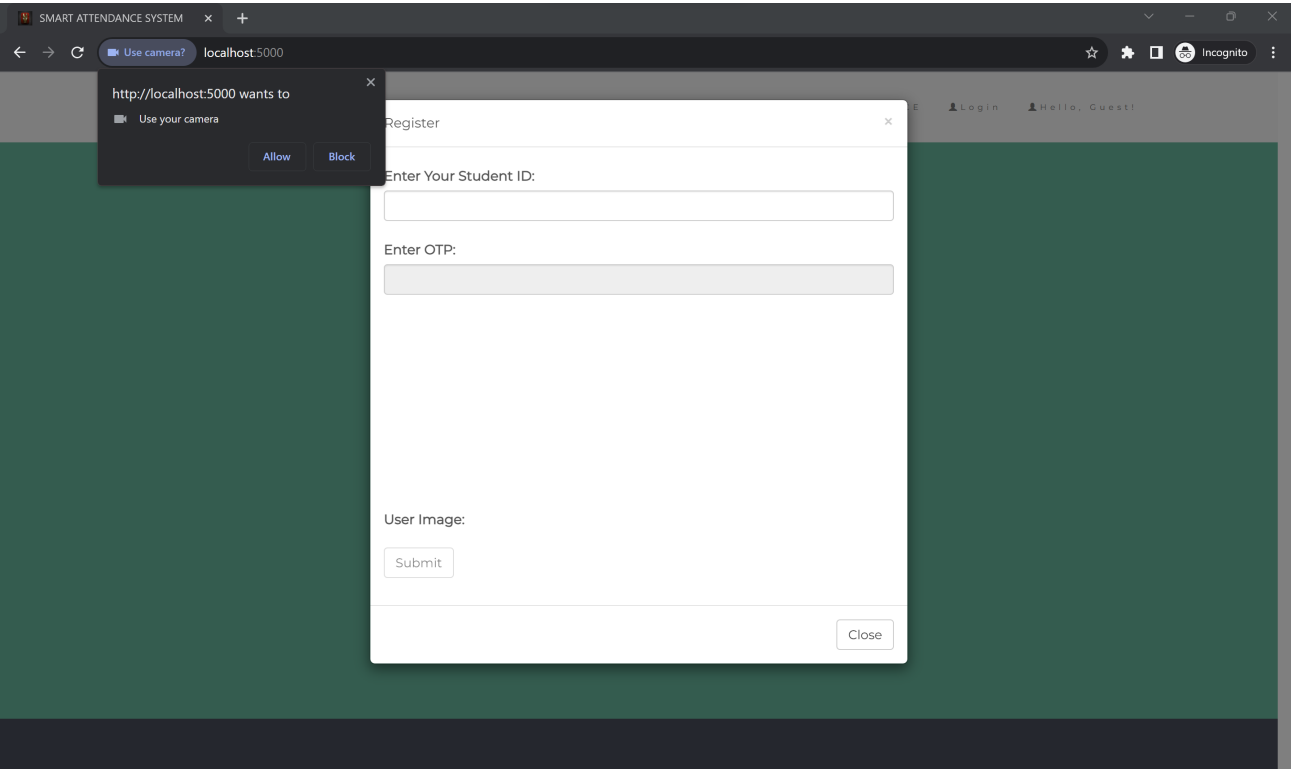
Showing 1 to 3 of 3 entries

Previous1Next

# 5: Using the System

## 5.1: Student Registration

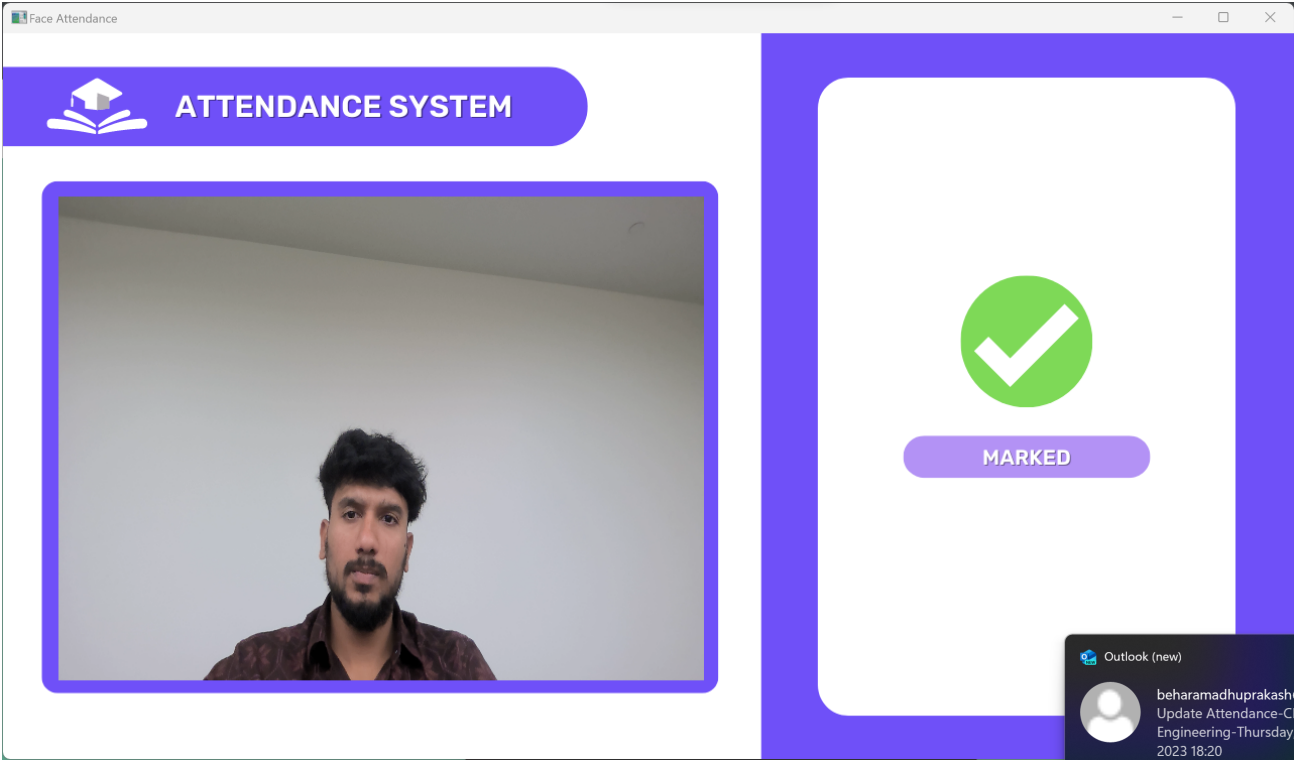
- Go to the Registration Page.
- Fill in necessary details and allow the system to capture your facial image.



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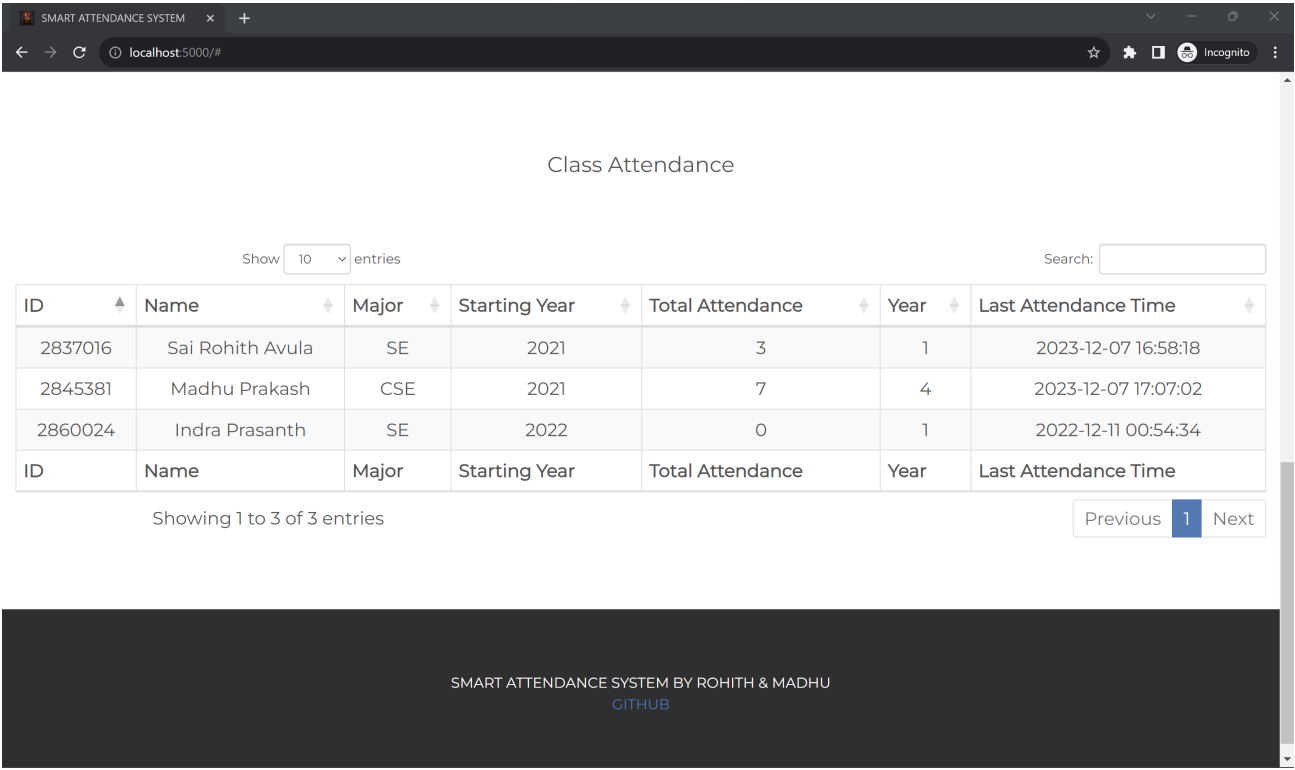
## 5.2: Marking Attendance

- Position yourself in front of your device's camera on the Attendance Page.
- The system will verify your identity and record your attendance.



5.3: Viewing Attendance Records

- Admins can review and manage attendance data through the Admin Dashboard.



6: Troubleshooting and Support

For technical issues or operational queries, refer to the FAQs or contact the support team.

## 7: FAQs

- **How do I ensure accurate facial recognition?**
- Ensure good lighting and face the camera directly.
- **What if the system doesn't recognize me?**
- Attempt again or contact an administrator for manual attendance marking.