Attendance Management Web-Portal

INTEGRATED WITH FACE RECOGNITION CAMERA

PROJECT
presentation

Amrutvahini Polytechnic

Sheti and Shikshan Vikas Sanstha, Sangamner

Presented By -

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Solution to the problem

✓ Helps managing records.

✓ Capture attendance automatically.

✓ Reduces human efforts.

✓ Maintaining records is easier task.

✓ Attendance gets marked from faces recognized.

User Based Problem

- Traditional way of hand written registers.

- Time Consuming.

- Becomes complicated with increase in strength.

- Tedious job to maintain records of students.

Introduction

Attendance Management Web-portal

Integrated with Face Recognition Camera

Introduction

- ❑ Face recognition is an important application of Image processing owing to its use in many fields.

- ❑ Identification of a person in a classroom for the purpose of attendance is one such application of face recognition.

- ❑ The purpose of developing attendance management system is to computerize the traditional way of taking attendance.

- ❑ Performs the daily activities of attendance marking and analysis with reduced human efforts.

Software Requirements

XAMPP

Pycharm

Programming Languages

Hardware Requirements

Computer System with -

Processor : AMD Ryzen 7

Solid State Drive – 500GB

Ram : 16 GB

Camera with good resolution

HTML

CSS

JAVASCRIPT

PHP

PYTHON

MYSQL

# Procedure…

Following steps are taken into consideration while making project

1) Student Registration & Train Model
2) Login
3) Dashboard
4) Face Detection
5) Face Preprocessing
6) Face Recognition
7) Storing Attendance to Database

Student Registration & Train Model

1. Python code is used.
2. Manually done.
3. Student data fetched and stored in database.
4. Images are captured of each student.
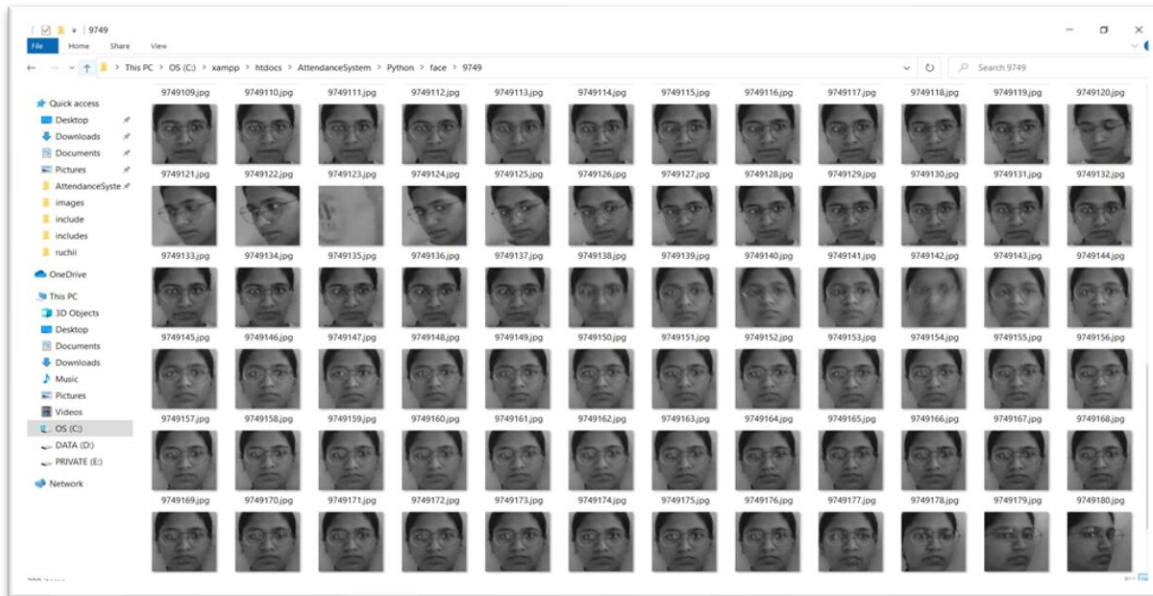
Data Registration -

- Face Registration

```
C:\Windows\py.exe

Email: ruchitaamale.click@gmail.com

Enrollment No (4 Digit number): 9749

Roll No: 17

Mobile No: 8888926475

Select Department:
        1. Computer
        2. Mechanical
        3. IT
        4. Automobile
        5. E&TC
        6. Civil
Enter Choice: 1

Select Semester:
        1. Semester 1
        2. Semester 2
        3. Semester 3
        4. Semester 4
        5. Semester 5
        6. Semester 6
Enter Choice: 6

Shift:
        1. Shift 1
        2. Shift 2
Enter Choice: 1
```
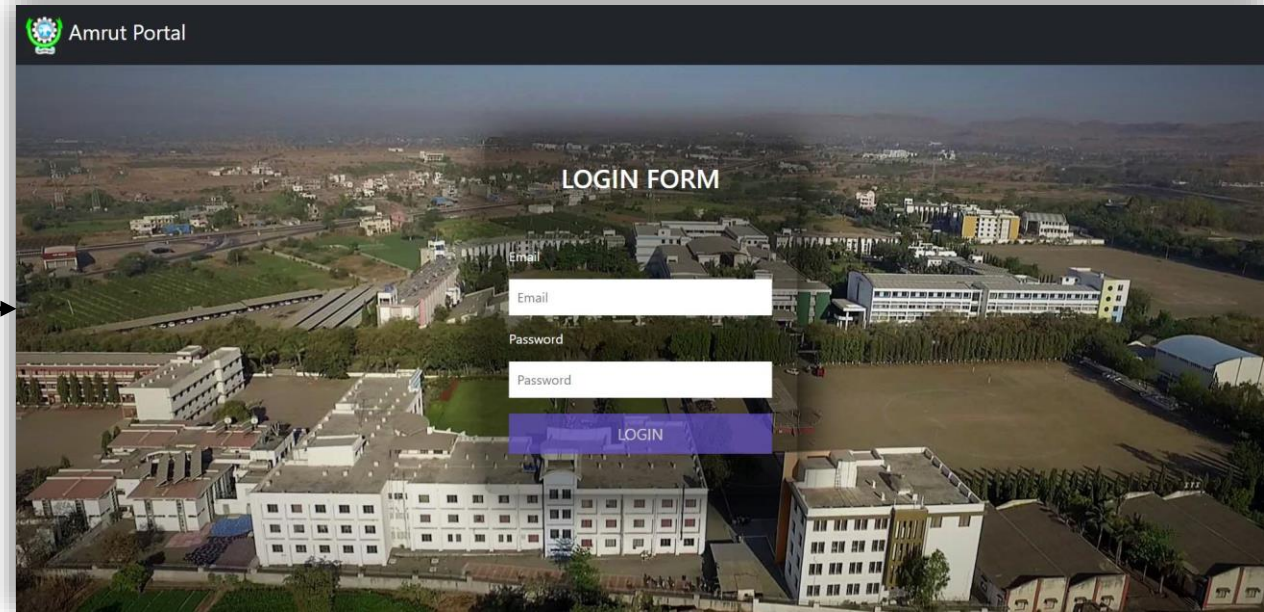
Login

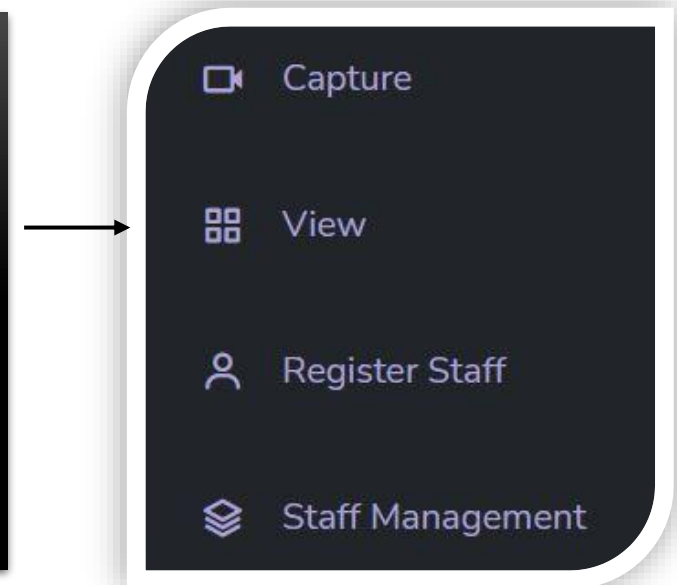Consist of three types:

1. Student Login

2. Teacher Login

3. Admin Login

Dashboard

Consists of variety of Features :

1. Capture Attendance

2. View Attendance

3. Register Staff

4. Staff Management

5. Profile

View Attendance -

Here we take user input using form controls such as department, class shift and subject. When the user click on View button displays the attendance of selected subject.

Amrut Portal

View Attendance

SelectDepartment	SelectClass	SelectShift	SelectSubject
--Select--	--Select--	--Select--	--Select--

View Attendance

To view the Attendance Select the Department Class & Shift of your class and press Record Attendance

Amrutvahini Polytechnic - Attendance Web Portal

AMRUTVAHINI POLYTECHNIC

Amrutvahini Polytechnic, To provided Diploma course it has been established in the year 1983 on no grant basis at Amrutnagar as the outcome of hard efforts made by Late Hon. Shri. BHAUSAHEB THORAT, the President of the "Amrutvahini Sheti & Shikshan Vikas Sanstha"

CONTACT

Address: Amrutvahini Polytechnic, P.O. Sangamner S.K.,Tal. Sangamner, Dist. Ahmednagar-422608, Maharashtra, India.
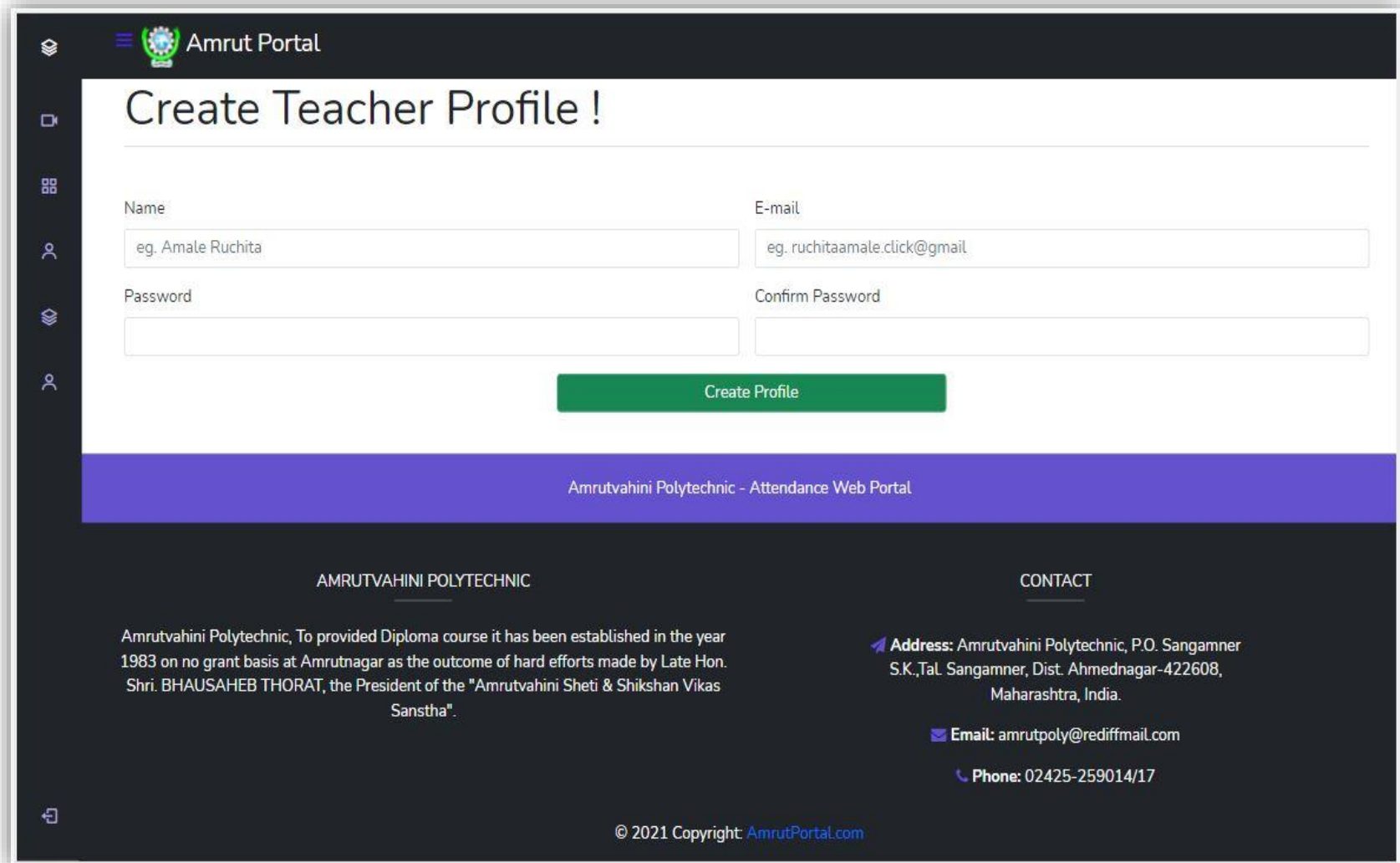
department: ComputerTechnology
class: CM1I
shift: Shift1
subject: ENG

date	present_students
2021-07-01 00:53:41	9749

Select other subject.

Register Staff -

It is used to create a new teacher profile. When the admin enter the data, the data in the form gets fetched and stored to the user table and teacher login is created.

Manage Staff -

It is used to Manage Staff Profiles. Here, all the staff information is fetched and presented in table format.

Amrut Portal

Staff Management!

Name	Email	Department	Action
Amol Shekar	teacher1@gmail.com	Computer Technology	delete
Baheti S. S.	teacher2@gmail.com	Computer Technology	delete

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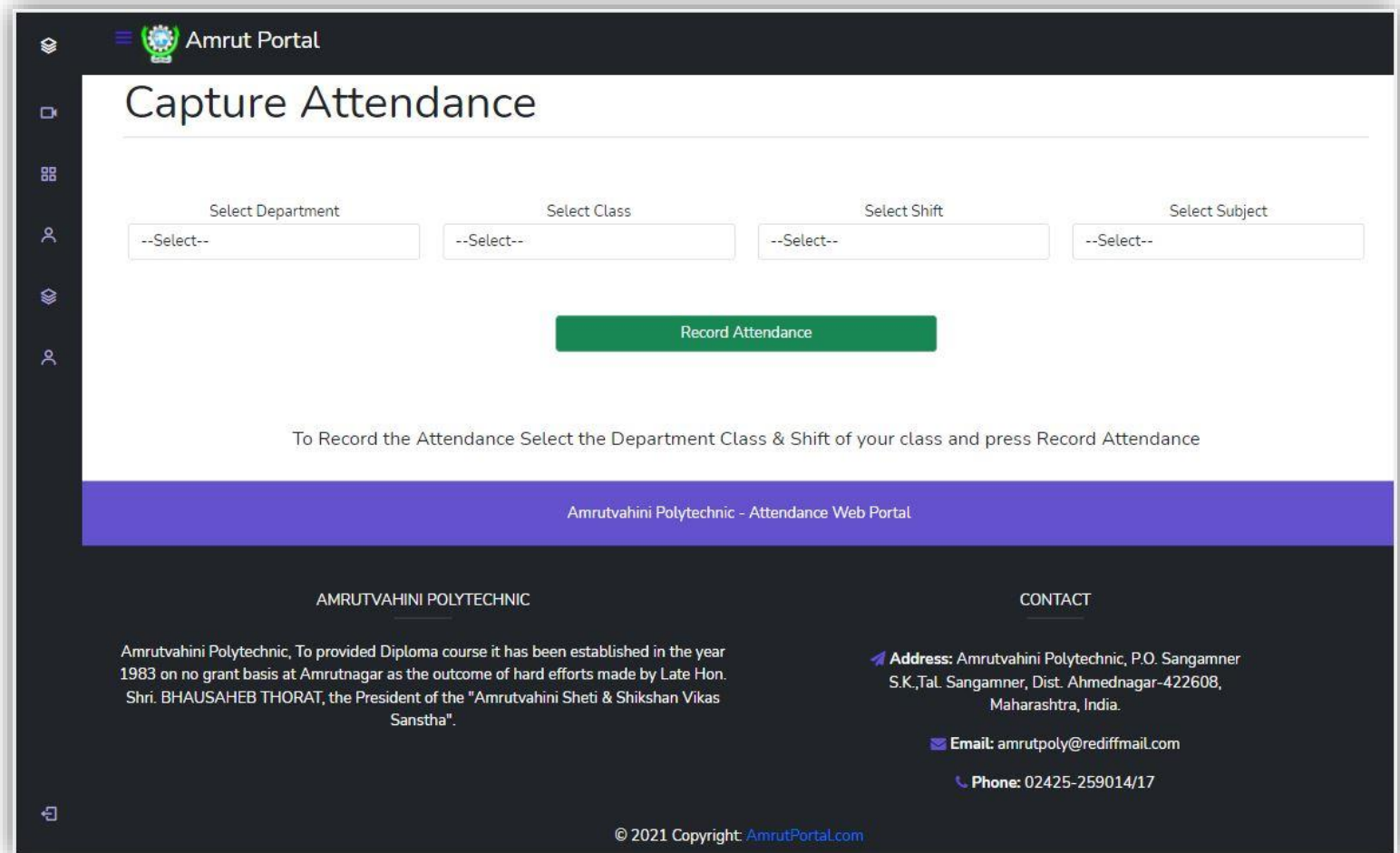
CONTACT

Address: Amrutvahini Polytechnic, P.O. Sangamner S.K.,Tal. Sangamner, Dist. Ahmednagar-422608, Maharashtra, India.

Email: amrutpoly@rediffmail.com

Phone: 02425-259014/17

📷 Capture Attendance-

When user gives the input to the form, the camera connected to the system starts taking the pictures of the students in the classroom. There are many faces captured in this single image and finally this image is send for further processing.

Face Detection

Face detection is a process of locating a face inside an image frame. Face Detection targets on finding the faces (area and size) in an image and probably extract them to be used by the face recognition algorithm. In recent years, many methods are proposed for detecting the faces. Here, we will be using haar-cascade method.

Face Preprocessing

Not all the pictures have the same zoom on the face and may not all have the same size. Most of the algorithms for facial recognition require the same size for the entire training set. Pre-processing includes different modifications. First of all, the faces need to be centered in the picture in the same way. The aim is to have the eyes at the same level and the nose at the same position for all images.

Face Recognition

When the faces will be detected and sorted, then finally each of those faces will be taken into consideration one after another. Each face will be compared with the faces previously stored into the database at the time of training model.
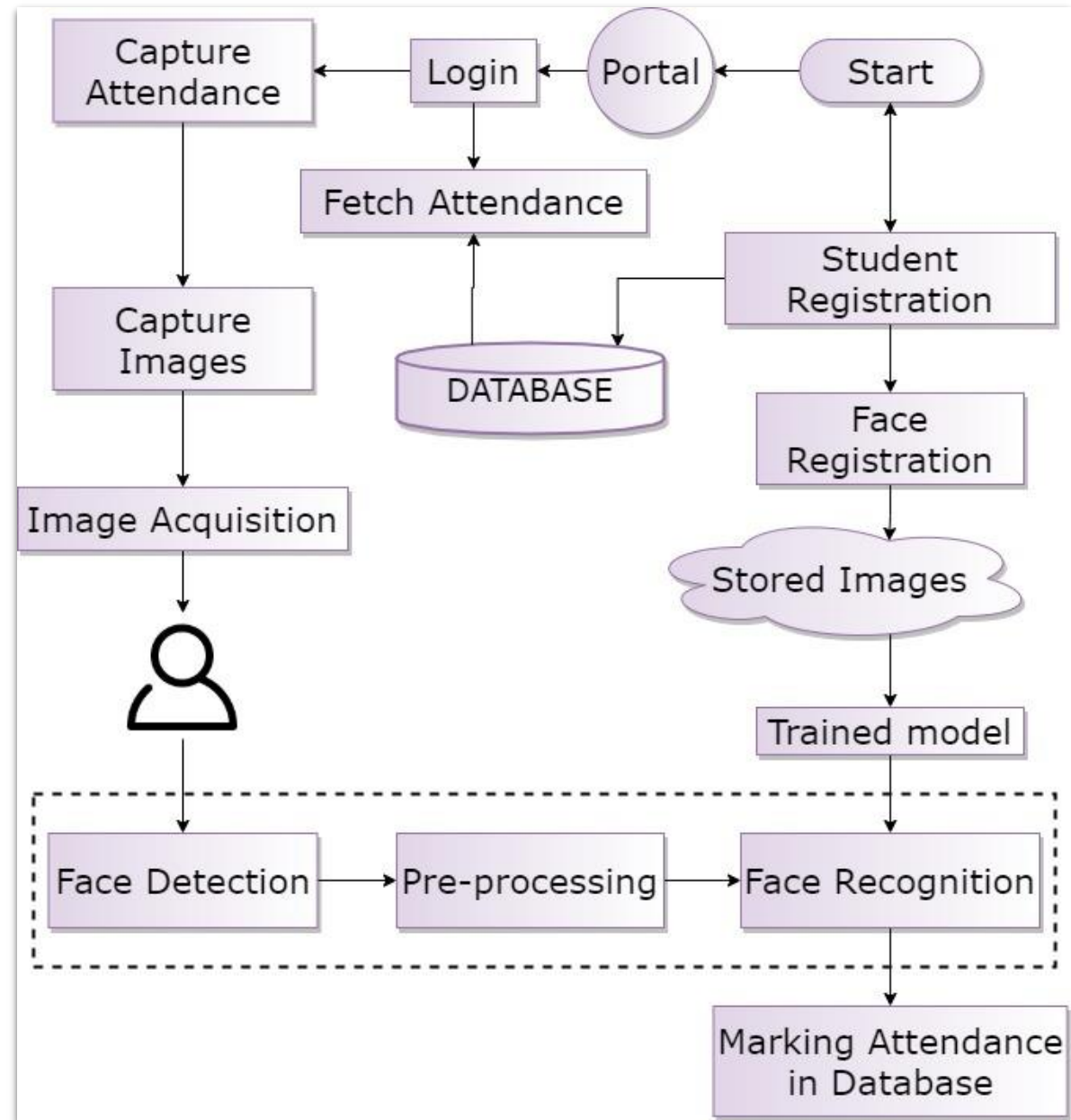
Storing Attendance to Database

Now finally, a specified data of the faces recognized by using LBPH method will be send to the server for marking Attendance.

System Diagram

Thank You

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