



Agenda

- Definition
- Scope
- Project Status
- Methodology
- Data Flow Diagrams
- System Architecture
- Database Dictionary
- Database Diagram
- Demo
- Designing of System (Snapshots)
- Learning and experience

Definition

Face Recognition is a biometric method of identifying an individual by comparing live capture or digital image data with the stored record for that person.

Face Recognition Attendance System is marking of attendance based on this technology.











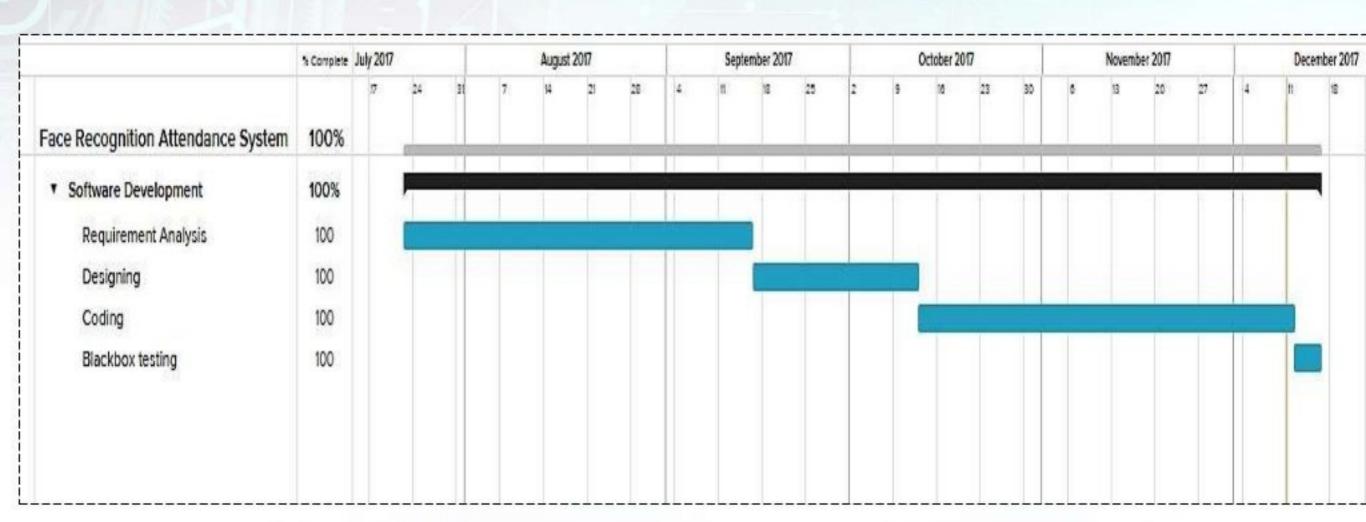




Scope

- Provides an automated attendance system that is practical, reliable and eliminate disturbance and time loss of traditional attendance systems.
- Present a system that can accurately evaluate student's performance depending on their recorded attendance rate.

Project Status: Completed

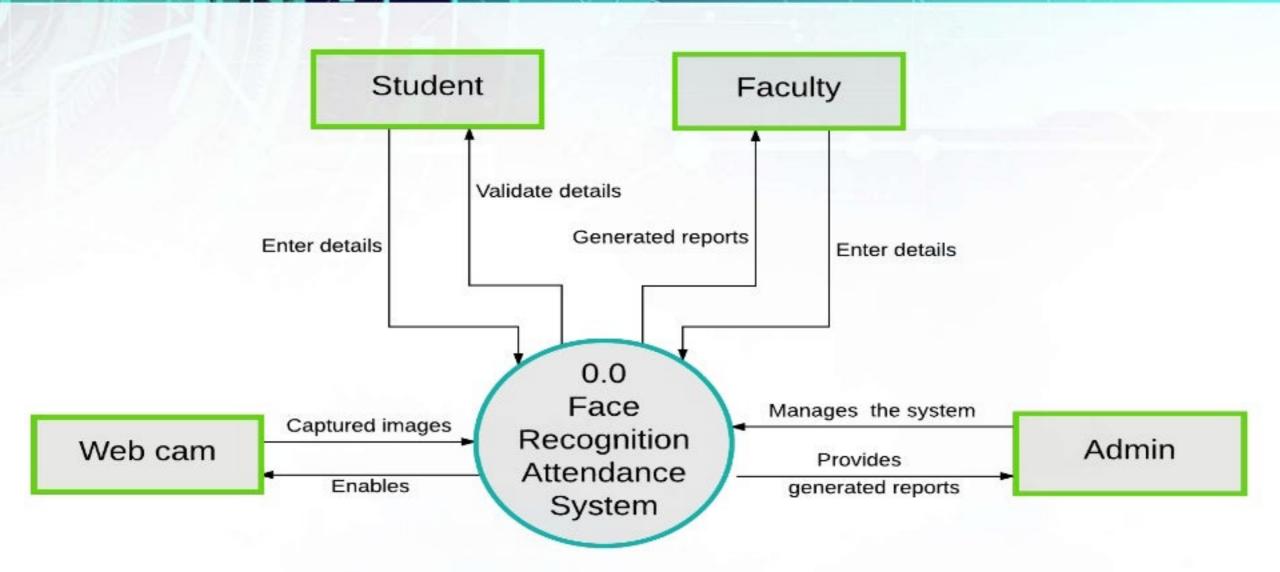


Methodology

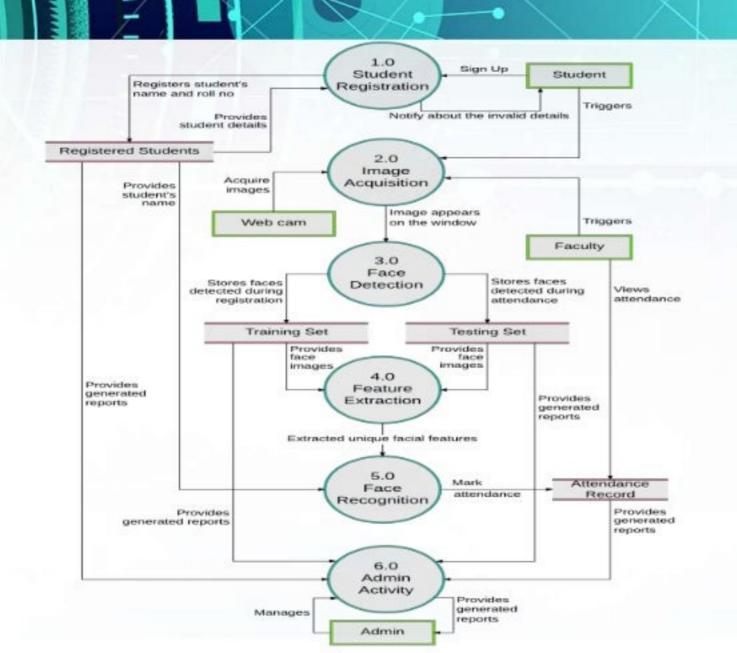
- Waterfall Model is a sequential approach, where each fundamental activity of a process represented as a separate phase, arranged in linear order.
- In the waterfall model, you must plan and schedule all of the activities before starting, working on them (plan-driven process).



System context diagram



DFD level 0



DFD level 1.1

Student Registration

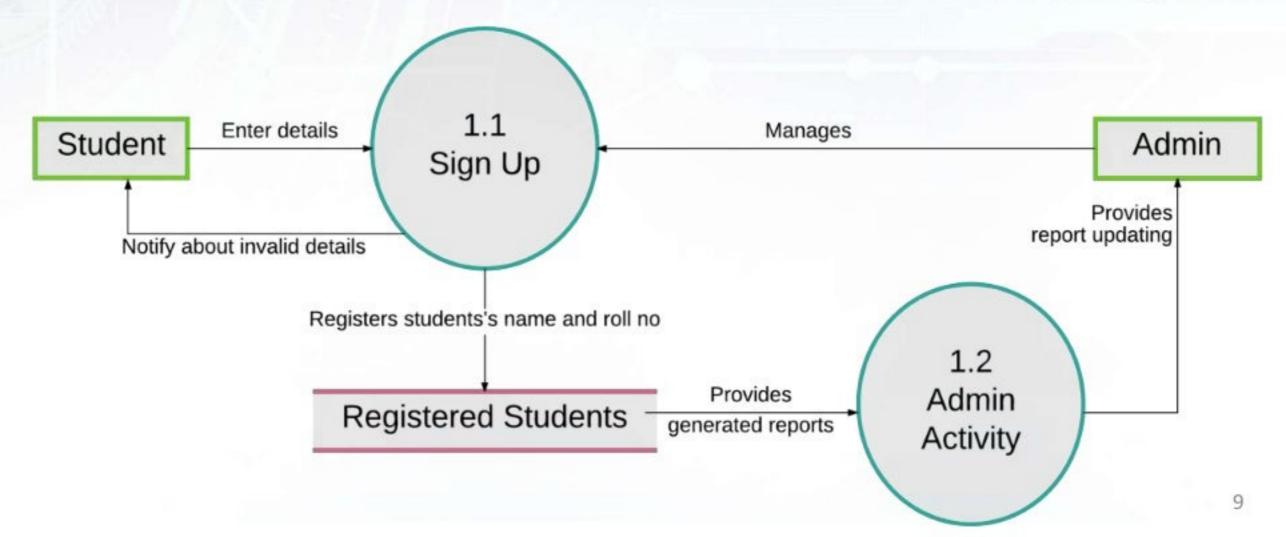
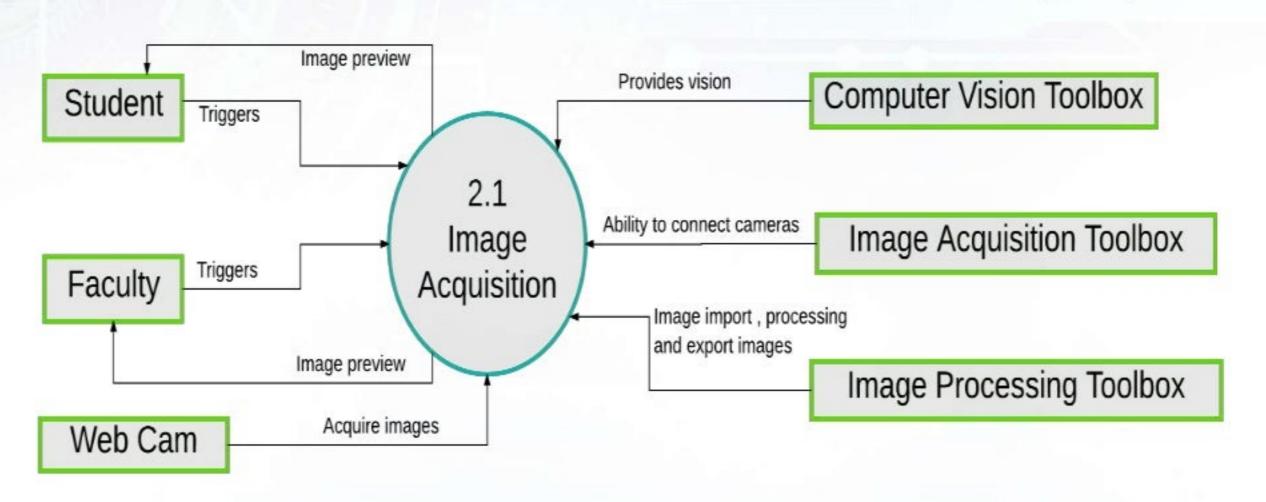
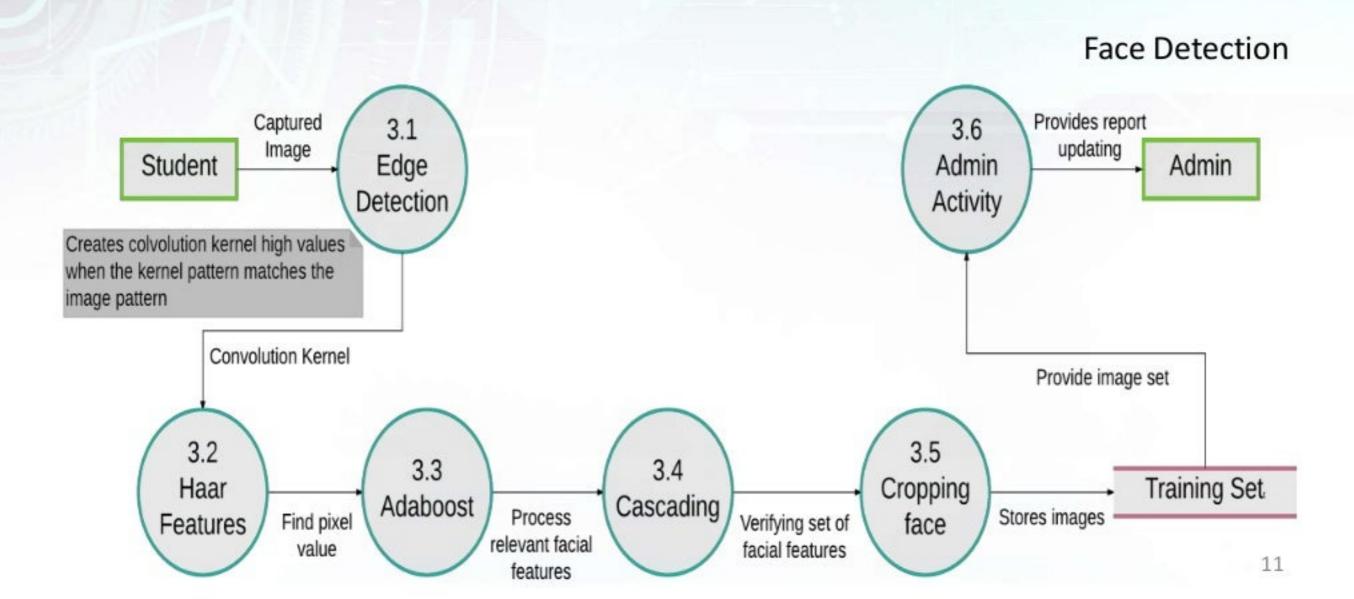


Image Acquisition

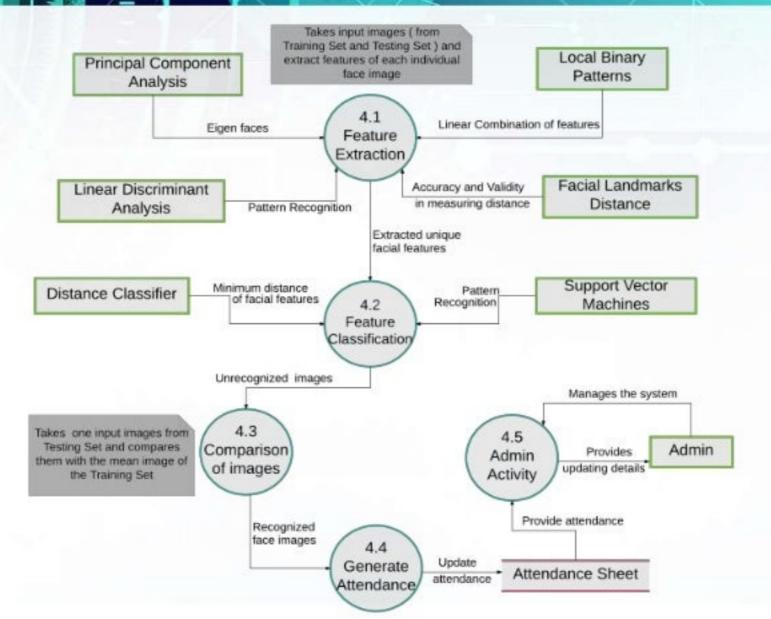
DFD level 1.2



DFD level 1.3

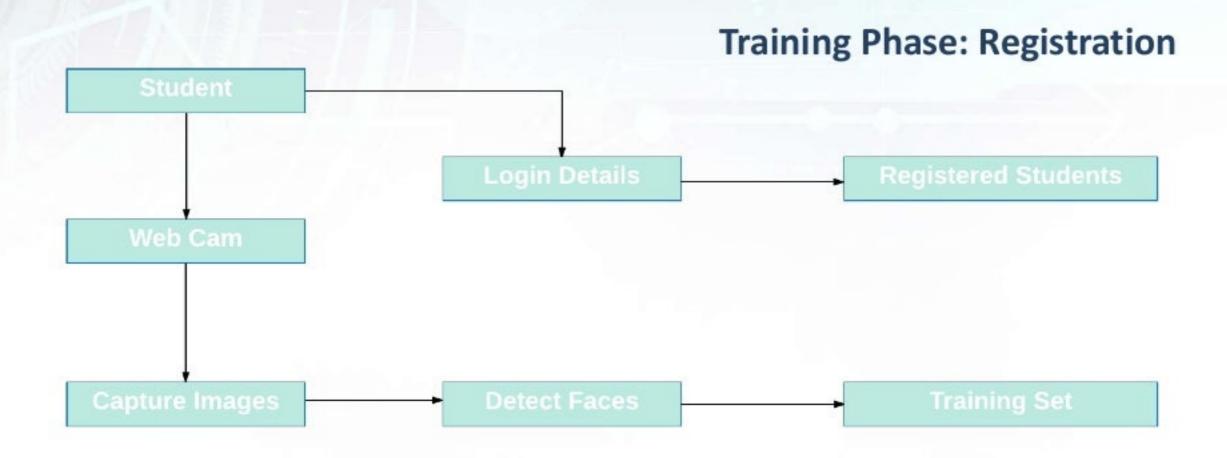


DFD level 1.4



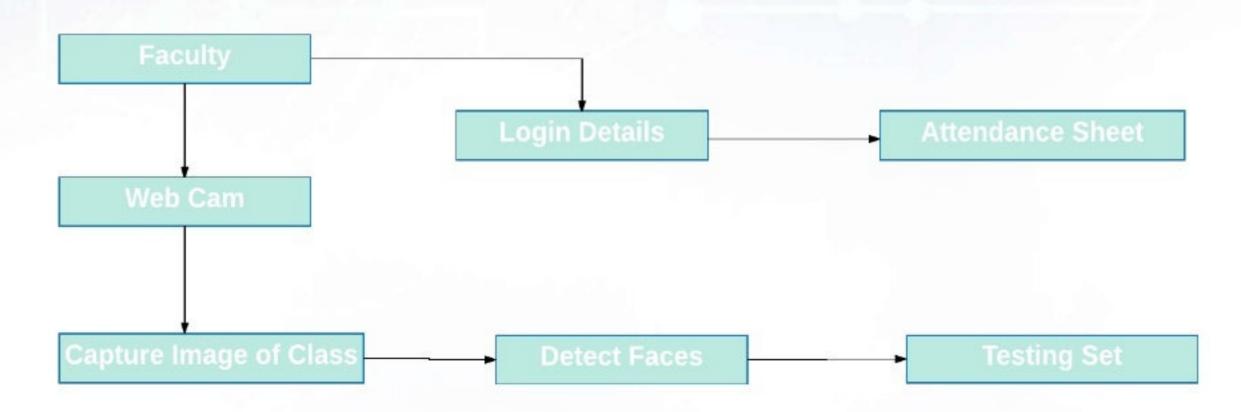
Face Recognition

System Architecture



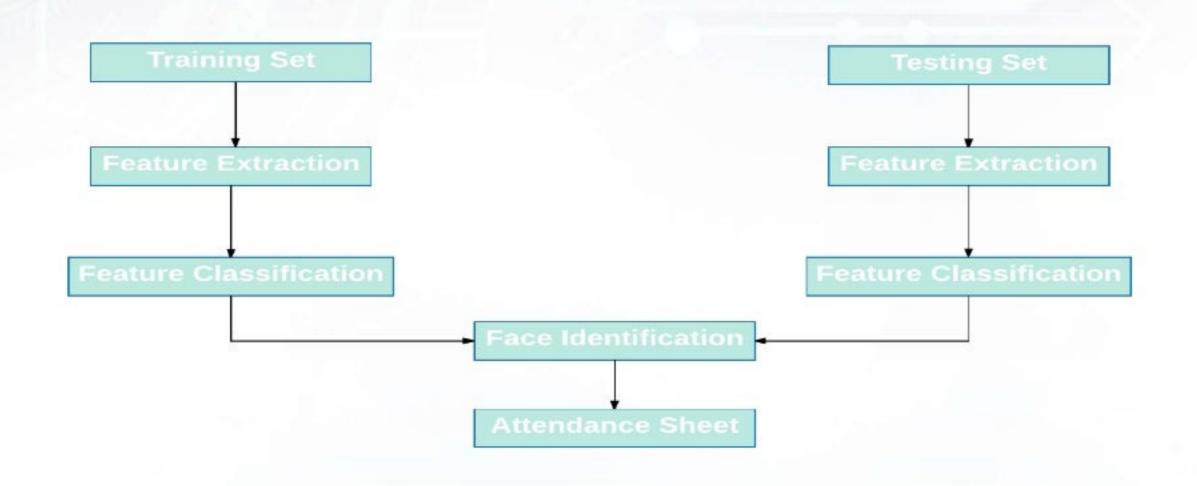
System Architecture

Testing Phase: Attendance



System Architecture

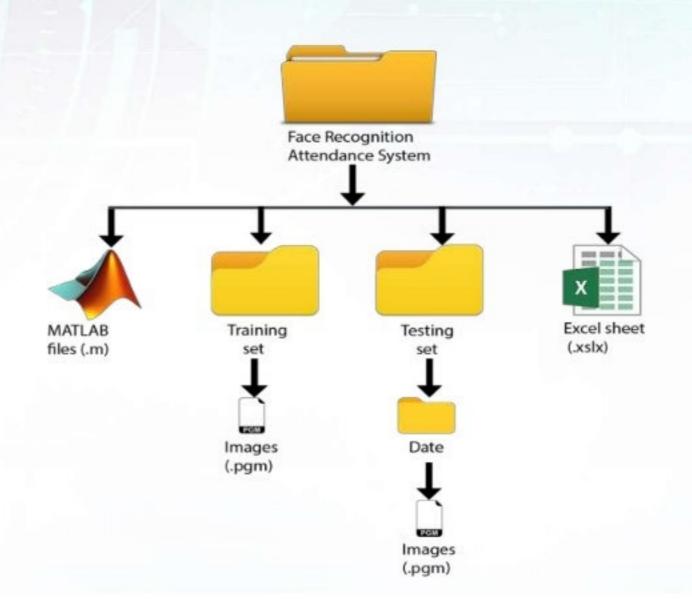
Recognition Phase

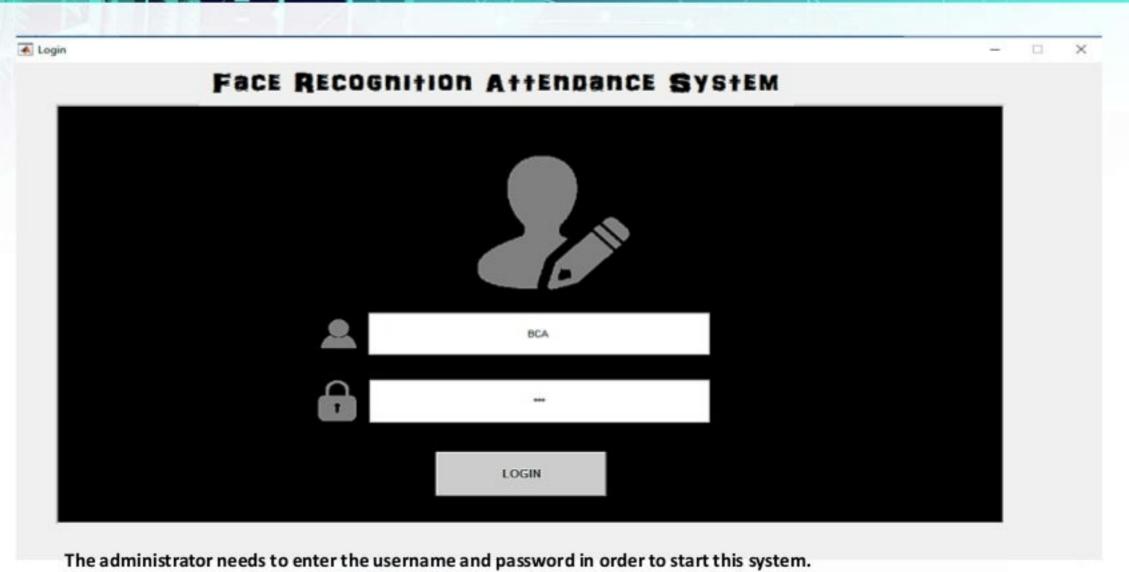


Database Dictionary

Data Type	Length	Constraint	Description
Int	3	Primary key	Student roll no
Varchar	20	Not null	Name of student
Date	10	Not null	Date of the attendance
Time	10	Not null	Time of the attendance
Varchar	7	Present or Absent	Attendance of a student
.pgm	100	Size must be of 11KB	Images of students
	Int Varchar Date Time Varchar	Int 3 Varchar 20 Date 10 Time 10 Varchar 7	Int 3 Primary key Varchar 20 Not null Date 10 Not null Time 10 Not null Varchar 7 Present or Absent

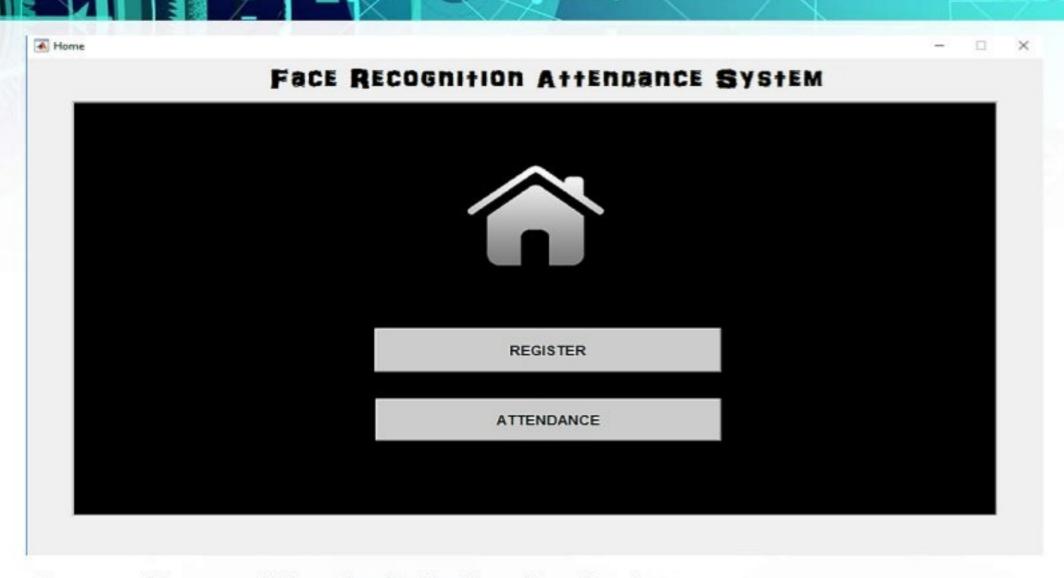
Database design





Log in

Home







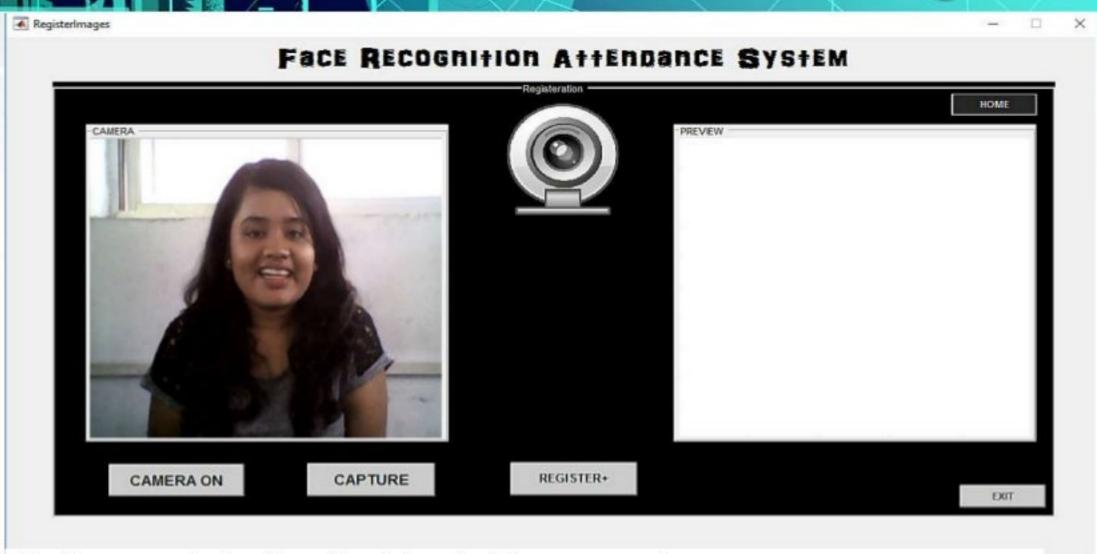
Registering Images



On successful login, the interface to capture images appears.

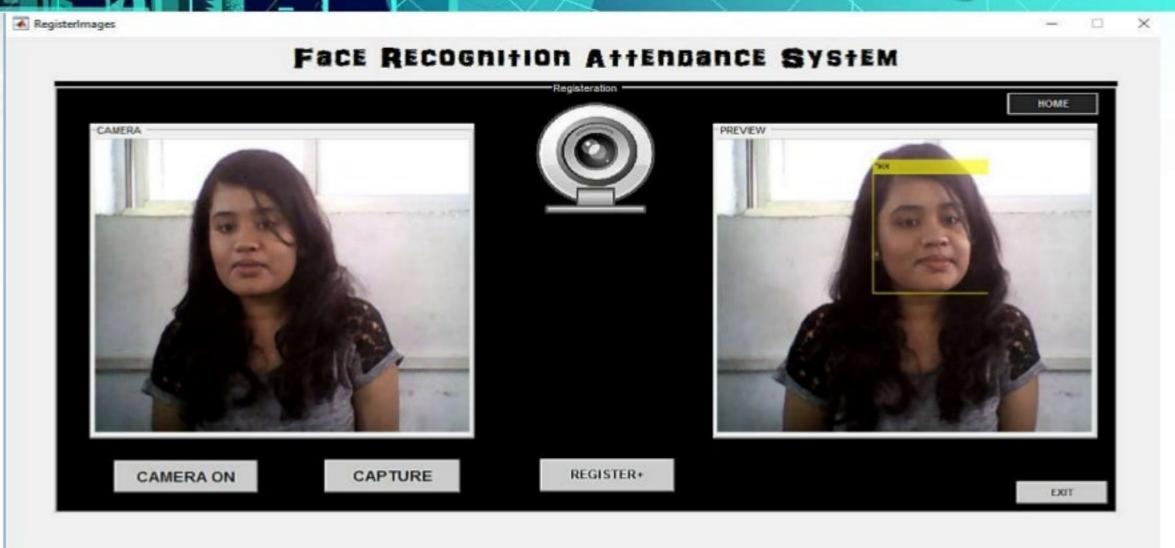
On clicking the CAMERA ON button, the dialog boxes appear to ask about the device type and the resolution type

Registration



After the camera settings have been selected, the student's image appears on the axes.

Registration



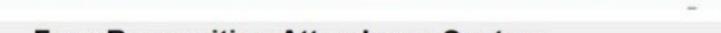
When the capture button is pressed the image has been captured and preview is shown into other axes highlighting the detected face.

Training set



Multiple faces are captured while registration with different expression for more accuracy.

Attendance Time



Face Recognition Attendance System

♠ AttendanceTime



On clicking the GENERATE ATTENDANCE button, the recognition process starts and the detected faces are recognized.

Recognized faces





Matched Image



Test Image



Matched Image



Test Image



Matched Image







Matched Image



Test Image



Matched Image



Test Image



Matched Image





Matched Image



Test Image





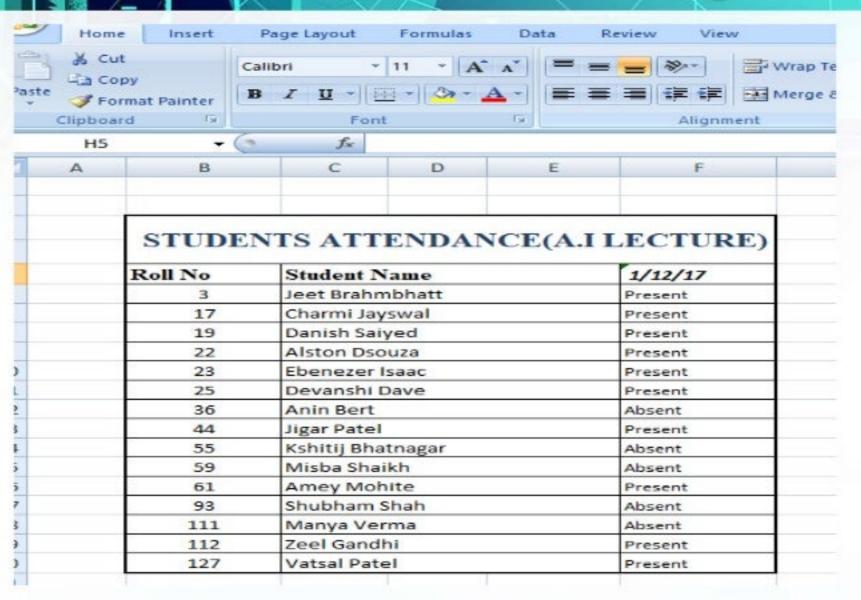
Test Image



Matched Image



Generating attendance



Learning and Experience

From scratch to working software, carrying out real-world software projects in our academic studies helps us to understand what we have to face in industry.

It was a wonderful experience working on **Face Recognition Attendance System** with enthusiastic and like-minded people wherein we explored a part of Artificial Intelligence, i.e. image processing, which relates to our system from capturing images, detecting faces, storing them in a database, extracting facial features, recognizing them and generating attendance through different algorithms, books, websites and with the guidance of our guide.

We have learned most of the industrial strategies used for completion of project by keeping accounts of time, quality, and budget.

This project was a door to a Stairs of Success towards the bright Software Engineering career.

