**Repository URL:**

**Challenges faced:** One groupmate dropped; his parts of the work are not finished yet.

**Features done by Sadman Sakib Khan Promit:**

Backend was done using Python Django Framework, Django Rest Framework. It has students’ and faculty members’ information such as profile details, attendance, grades history. Session, Token and Basic Authentications were implemented to manage access level for various users. SQLite3 has been used for database.

**Features done by others:**

*Automated Attendance System by Face Recognition* objectives:

1. Detection
2. Recognition
3. Attendance update
4. Updating record in Excel

Basics: Detection is done by the help of OpenCV and Haar cascades Face detection using Haar cascades is a machine learning based approach where a cascade function is trained with a set of input data. OpenCV already contains many pre- trained classifiers for face, eyes, smiles, etc. Today I will be using the face classifier.

AttendanceProject: Recognition is done by LBPH recogniser

Local Binary Pattern (LBP) is a simple yet very efficient texture operator which labels the pixels of an image by thresholding the neighborhood

of each pixel and considers the result as a binary number.

LBPH is one of the easiest face recognition algorithms. It can represent local features in the images. It is possible to get great results (mainly in a controlled environment). It is robust against monotonic gray scale transformations. It is provided by the OpenCV library (Open Source Computer Vision Library).

Python libraries used

OpenCV-python

Face recognition

Numpy

Csv

Cmake

Dlib

xlwt

Datetime

Xlutils.copy

Pathlib