***TEST SPECIFICATION***

**Face Recognition Attendance System**

**Group-14**

**1. Sravya Parankusham (CSUID: 2792970)**

**2. Sathyanarayanan Sivaramakrishnan (CSUID: 2793009)**

**3. Sri Harish Reddy Alla (CSUID: 2824635)**

**4. Yashwanth Reddy (CSUID: 2819758)**

**1.0 Introduction**

Face Recognition is a recognition technique used to detect faces of individuals whose images are saved in the data set. This document describes all the test cases, test plan for all the data and functions.

**1.1 Goals and objectives**

Recognition of human face is an active issue for authentication purposes specifically in the context of attendance of students. There are numerous objectives for the face attendance system testing process. The software will be carefully examined for coding mistakes and logic flaws. This project will be tested not only for bugs but also to ensure that it is of the highest quality. It should have the following characteristics: well-executed software, excellent production values, an easy-to-use interface with a common Windows 'feel,' and a full-featured engine with respectable performance on a wide range of devices.

**1.2 Statement of scope**

During the testing process, several design principles will be validated. The user interface should be simple to use. The database should read and write data flawlessly. Using a camera to capture images of the students' faces. When the result is displayed on the face website, the taken image is compared with the face data individually to present the student's face, where attendance is marked. Data must be flawlessly exported to a facial recognition tool and a Google sheet.

**2.0 Test Plan**

**2.1 Software to be tested**

The software here to be evaluated simply comprises of what and where in the facial recognition attendance system to be examined. The testing exclusivities include tests that have not yet been fully developed and hence require extra time to implement and merge modifications.

* Authentication of the student will be managed
* Authentication of the admin will be managed
* Registering new student data in database
* facial recognition algorithm will be tested
* compare the capture data with the database will be tested
* marking attendance will be managed
* result in mobile will be tested
* API gateway will be tested

**2.3 Testing tools and environment**

Simply said, testing tools are the equipment required to evaluate a system. Because the system is internet-based, we can test it from any location. PyTest and saleniuem are the package tool in python to run the test and manual testing for API using python condition and package. As this project is not a very complex data, manual testing is better option.

**2.4 Test schedule**

As the project is yet to finish, this part of the process is on hold

**3.0 Test Cases**

|  |  |
| --- | --- |
| ID | **1** |
| Test Input | Authorization of the user |
| Expected Output | login successful |
| Description | This is a login module, which has two tabs as username and password. Username as admin or student detail. password as per the condition |

|  |  |
| --- | --- |
| ID | **2** |
| Test Input | Register module |
| Expected Output | Success on registration |
| Description | In this module, the data of the students are added in the admin user. Each student data is classified by the name and image of the student. A conformation mail will be sent to the student of the registration |

|  |  |
| --- | --- |
| ID | **3** |
| Test Input | Database module |
| Expected Output | Loading and saving data successful |
| Description | This module stores the data of each student. this work as backend storing data where you can store the new student and retrieve the stored data to compare |

|  |  |
| --- | --- |
| ID | **4** |
| Test Input | Face recognition model |
| Expected Output | Successful running |
| Description | This module is to run the algorithm to compare the image data and find the correct object. This takes two inputs, one from camera and another from database. The captured image is compared with the already stored student image from the database. the output is transferred |

|  |  |
| --- | --- |
| ID | **5** |
| Test Input | API module |
| Expected Output | Pathway is successful |
| Description | This module is to transfer the output data to the desired platform. In this project, we used to google spread sheet API from google cloud. This marked the data in spread sheet |