



Software Requirements Specification

For

Faculty Attendance System

Version 1.2

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Revision History

Date	Version	Description
29 January 2021	1.0	Software Requirement Specification Document Initial Release
5 February 2021	1.1	Software Requirement Specification Document update Release
11 February 2021	1.2	Software Requirement Specification Document Update Release

1. Introduction

1.1 Introduction

This Software Requirements Specification is about the project named “Faculty Attendance System”. Maintaining the attendance is very important in all the institutes for checking the performance of Faculty. The Faculty Face Recognition system is used to train the faces of faculty and detect them when they come in front of the camera and put their attendance in the system.

1.2 Purpose

The main purpose of this system is to help faculty as well as other staff in simplifying and automate the whole attendance system using face recognition. Use of face recognition for the purpose of attendance marking is the smart way of attendance management system. Face recognition is more accurate and faster technique among other techniques and reduces chance of proxy attendance.

1.3 Document Conventions

When writing then SRS document for Facultyattendancesystem the following terminologies are:To make the document more effective and readable I used best font style and font size and Headings are bold and highlighted with attractive colors.

1.4 Intended Audience and Reading Suggestions

This document is written for the project managers, programmers, designers, developers, testers, documentation writers, users involved in the model of smart attendance system. This document consists of the various steps and procedures for the model. Following section describes the rest of the product function. Scope and other overall description..

1.5 Objective

The objectives of this projects are:

- Creating a database that contains attendance information of the faculties.
- Linking this system to an existing faculty attendance management system.
- Capturing live feed from camera to record attendance times.
- Linking the information captured by the feed to the database for accuracy of results.

1.6 Overview

Section 1: The SRS will provide a detailed description of the Faculty Attendance System This document will provide the outline of the requirements, overview of the characteristics and constraints of the system.

Section 2: This section of the SRS will provide the general factors that affect the product and its requirements. It provides the background for those requirements. The items such as product perspective, product function, user characteristics, constraints, assumptions and dependencies and requirements subsets are described in this section.

Section 3: This section of SRS contains all the software requirements mentioned in section 2 in detail sufficient enough to enable designers to design the system to satisfy the requirements and testers to test if the system satisfies those requirements.

1.7 Project Scope

The scope of the system is to have a high-tech environment in our University for the attendance management of faculties.

Also, this whole system can be developed for the students as well in the near future, due to this lot of time can be save to take the attendance in the class as well as laboratory.

2. Overall Description

2.1 Product Perspective

The product faculty attendance system, is an independent product and does not depend on any other product or system. The product will automate various tasks associated with handling faculty details and better organizing the stored information and optimum performance, thus helping the collages to ensure smooth working of these process.

2.2 User Classes and Characteristics

USERS:

There are two types of user

1. Administrator
2. Faculty

User Characteristics:

This system gives access to two kind of users:

1. Administrator or User – The personnel or collage admin will have the access to add, delete and modify information that is stored in the database.
2. Authorized User (Faculty) – They are the end user of the system.

2.3 Operating Environment

External Interface Requirements

(A) UserInterfaces

- GUI along with meaningful Frames and buttons
- Reports are generated as per the requirement
- Refer Appendices2.

(B) HardwareInterfaces

Hardware Environment	Dual Core 2 nd generation/
System Configuration	RAM-512 MB HDD-80GB
Operating system	Windows XP/Vista/7/8/8.1

(C) SoftwareInterfaces

Front End	Django Framework
Back End	Django Administration & SQLite3

When invalid inputs are given to the modules then the error messages will be popped up in order to inform the user that the input provided is not taken by the database. When incomplete information is provided by the user and the user tries to submit the form in order to store the details in the database the system will pop up a message box asking the user to enter all the detailsrequired.

(D) CommunicationsInterfaces

The machine will have to be part of the college Local area Network to access the central database.

2.4 Assumptions and Dependencies

- We assume that the admin person do all the data entry based and the correct values obtained from forms and registers.
- We assume that the computers that will use the software will be part of the collage LAN.
- Users with admin access should be careful in deleting or modifying any information knowingly or unknowingly which will lead to inconsistency of the database.
- The end users of this system are assumed to have basic level of computer knowledge i.e. point and click.

3. System Features

There are mainly five features in our software. They are divided in five separate activities. The features are 1. Home Screen, 2. Admin Dashboard, 3. Employee Dashboard.

3.1 Home Screen

3.1.1 Description and Priority

This is basically the first activity of the software. It comes with variety of option what user want to do. It is the gateway for every activity in the software.

3.1.2 Stimulus/Response Sequences

So basically, whichever option user will choose this feature will redirect the user to that particular activity.

1. If user will click on “Mark Your Attendance In” button then face detector will open and system detect the face of the user and if it is recognised by the system then user’s attendance marked in.
2. If user will click on “Mark Your Attendance Out” button then face detector will open and system detect the face of the user and if it is recognised by the system then user’s attendance marked out.
3. If user will click on “Log In” button then he/ she will redirect to the authentication page on that page user have to insert credentials.

3.1.3 Functional Requirements

The main requirement of this feature is to redirect user to the particular activity which user want to access. There are basically three option will be given to the user.

1. If user want to mark his/her attendance in so user have to click on “Mark Your Attendance In”.
2. If user want to mark his/her attendance out so user have to click on “Mark Your Attendance Out”.
3. If user want to login into the system so user have to click on “Login”.

3.2 Admin Dashboard

3.2.1 Description and Priority

If user enter credential and system identifies it as an admin so the system will redirect user to this activity. This activity is for admin to interact with the system it has several options for that.

3.2.2 Stimulus/Response Sequences

As this feature is divided into three functionalities we can discuss their response separately.

1. If admin want to register new employee then he/she will click on “Register New Employee” button then he/she will redirect to that activity where admin have to insert some details about the employee and then press add to register new employee.
2. If admin wants to see attendance report then he/she have to click on the “Attendance Report” button. Then admin will redirect to that activity where he/she can see current day’s attendance at the below of it admin can find two graphs for attendance of Last Week and current week. If admin will click on “By Employee” button so admin then have to enter employee details then admin can see that particular employee’s attendance. If admin will click on “By Date” button so admin then have to enter date of which he/she want to see attendance then admin can see that particular date’s attendance.

3.2.3 Functional Requirements

There are mainly two requirements of this feature.

1. Register New Employee

This function is use to register new employee in the system. So if the user who is admin want to add new employee so he/she have to click on this option.

2.Attendance Report

This function is use to see attendance report. The user can see current day attendance there. There is also two charts of attendance of last week and current week. If user wants see some particular

attendance report so there is two option 1. By employee: In this admin can see attendance report of particular employee 2. By Date: In this admin can see attendance report of particular date.

3.3 Employee Dashboard

3.3.1 Description and Priority

If user enter credential and system identifies it as an employee so the system will redirect user to this activity. This activity is for employees to see their attendance.

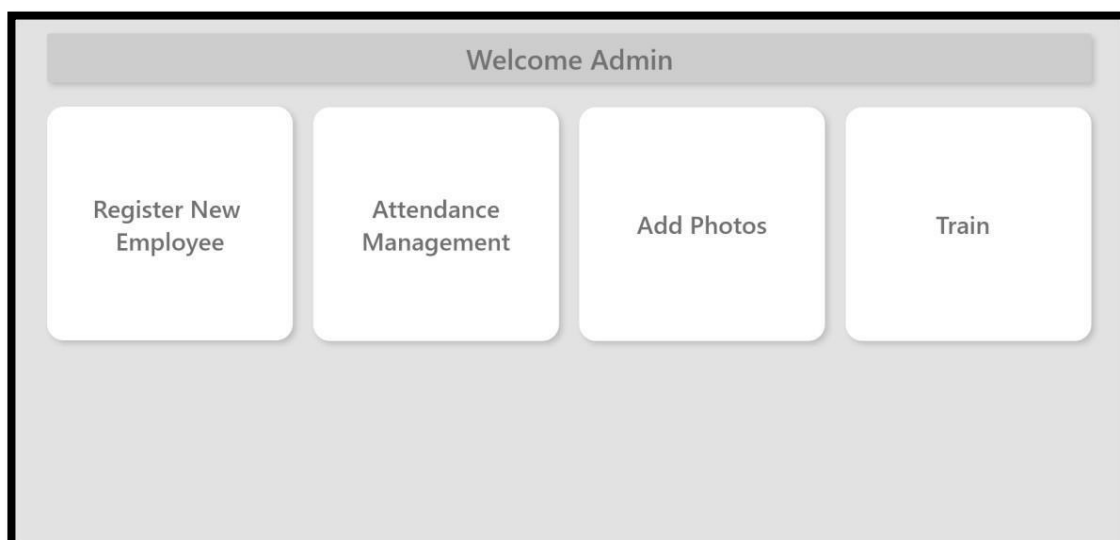
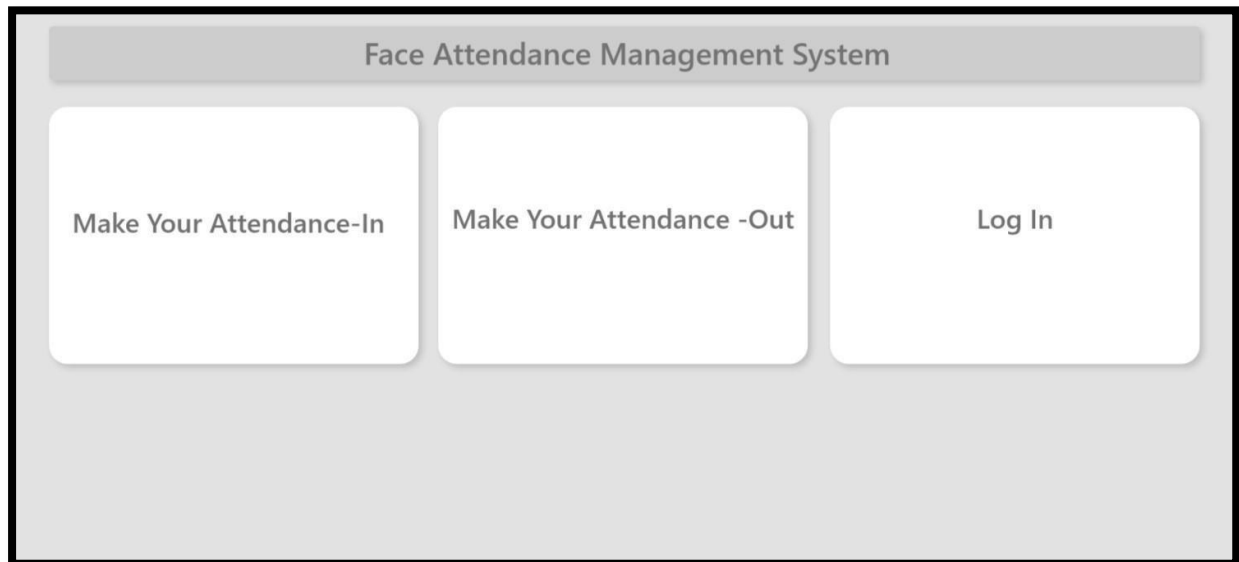
3.3.2 Stimulus/Response Sequences

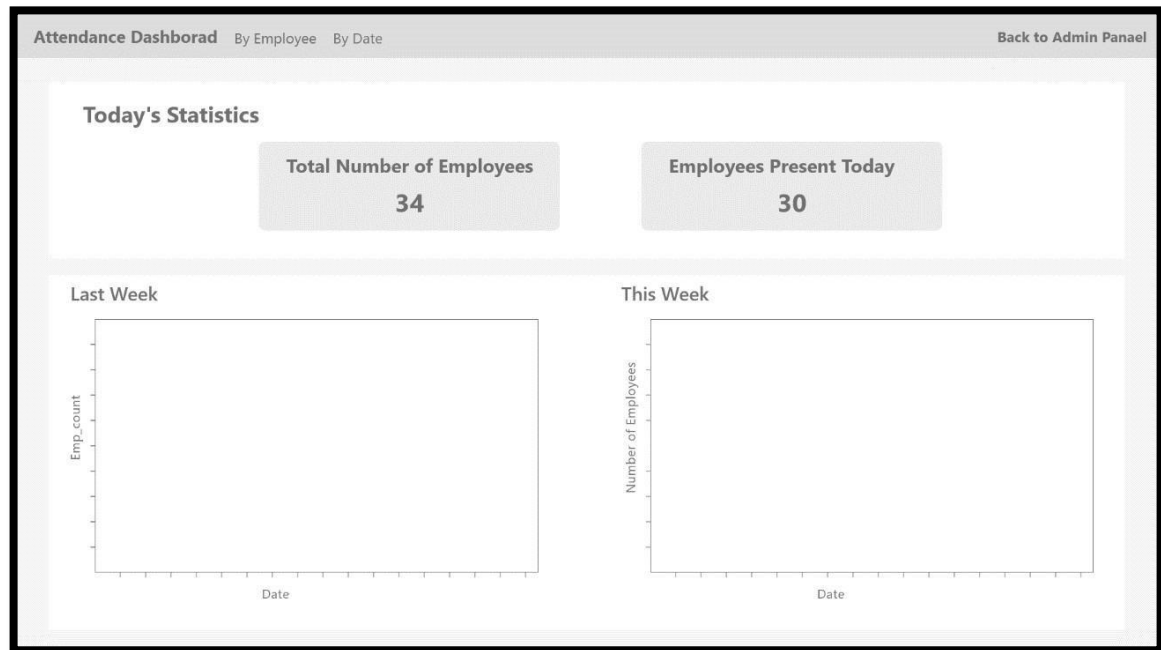
So there is only one response of the system in this activity that is if system identifies user as employee then this activity is called and then system will displays that particular employee's attendance report.

3.3.3 Functional Requirements

There is mainly one requirement of this feature. That is employee can see his/her attendance here.

4. External Interface Requirements





Attendance Dashborad By Employee By Date [Back to Admin Panael](#)

Select UserName And Duration

Username*

Date From*

Date To*

Attendance Dashborad
By Employee
By Date
Back to Admin Panael

Select Date

Date*

Select day

Select month

Select year

Submit

Date	Employee	Present	Time in	Time Out	Hours	Break Hours
July 3, 2020	Jay	A	9:00 Am	7:00 Pm	10 Hours	2 Hours
July 3, 2020	Dax	A	9:30 Am	7:00 Pm	10 Hours	2 Hours
July 3, 2020	Ritul	p	9:00 Am	7:00 Pm	10 Hours	2 Hours

Welcome Jay
Logout

View My Attendance

5. Other Nonfunctional Requirements

5.1 Performance

Easy tracking of records and updating can be done. All the requirements relating to performance characteristics of the system are specified in the section below. There are two types of requirements.

A. Static Requirements

These requirements do not impose any constraints on the execution characteristics of the system. They are:

1) Number of Terminals:

The software makes use of an underlying database that will reside at the server, while the front end will be available online to the administrative and departmental computers as well as admin and teachers.

2) Number of Users:

The number of users may vary, as this software finds applications in almost all department of the organization.

B. Dynamic Requirements

These specify constraints on the execution characteristics of the system. They typically include response time and throughput of the system. Since these factors are not applicable to the proposed software, it will suffice if the response time is high and the transactions are carried out precisely and quickly.

5.2 Security Requirements

The security requirements deal with the primary security. The software should be handled only by the administrator and authorized users. Only the administrator has right to assign permission like creating new accounts and generating password. Only authorized users can access the system with username and password.

5.3 Software Quality Attributes

Reliability: The software will not be able to connect to the centralized database in the event that the college LAN fails or in the event of the server being down due to a hardware or software failure.

Availability: The software will be available only to authorized users of the colleges like admin and other head to mark the faculty attendance, admin to add an update faculty records.

Maintainability: Backups for database are available.

Portability: The Software is a web-based application and so it is platform independent and is independent of operating system.