Software Requirements Specification

for

Smart Student Attendance System

Version 1.0 approved

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Table of Contents

[1. Introduction 1](#_Toc525677212)

[1.1 Purpose 1](#_Toc525677213)

[1.2 Document Conventions 1](#_Toc525677214)

[1.3 Intended Audience and Reading Suggestions 1](#_Toc525677215)

[1.4 Product Scope 1](#_Toc525677216)

[1.5 References 1](#_Toc525677217)

[2. Overall Description 1](#_Toc525677218)

[2.1 Product Users 1](#_Toc525677219)

[2.2 Operating Environment 2](#_Toc525677220)

[2.3 Assumptions and Dependencies 2](#_Toc525677221)

[3. Functional Requirements 2](#_Toc525677222)

[4. Nonfunctional Requirements 3](#_Toc525677223)

[5. Other Requirements 3](#_Toc525677224)

Revision History

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# Introduction

## Purpose

The Purpose of the Smart Student Attendance System (SSAS) is to allow faculty of an organization to access and modify the attendance records of classes. Each faculty member should be able to keep track of their class attendance in a user-friendly and intuitive way, saving time and effort.

## Document Conventions

SSAS stands for Smart Student Attendance System.

## Intended Audience and Reading Suggestions

This document is intended for system designers, as it outlines the requirements for the system, and it is up to the system designers to implement them in any way they see fit. The rest of this document contains a description of the intended users, operating system, application interactions, and dependencies. It is recommended that the document is read chronologically without skipping through sections.

## Product Scope

The software described in this assignment is an attendance system for schools and universities. The goal of this software is to be able to track student attendance activity of specific classes easily, saving time and effort on both the students’ and the faculty part. With this software being widespread, it should reduce the need for taking attendance on paper, leaving a positive mark on the environment, as well as reducing the amount of money spent on paper each year. Overall, attendance tracking should be made easy with this software.

## References

N/A

# Overall Description

## Product Users

This product is purely intended for gathering attendance information in educational institutions such as schools and universities. It is intended to only be used by faculty members of said organizations.

## Operating Environment

The SSAS is intended to operate on Android handheld devices, such as phones and tablets, running Android 11.0 (Red Velvet Cake) or above. The application is expected to function independently of most applications and software components, and should not have any unexpected interactions with other software on the device. The app should only interact with the phone’s browser to allow for user login, and with the mail app to allow the user to share attendance information with other devices.

## Assumptions and Dependencies

For this software, the plan is to use a third-party database to keep track of all students and faculty in an institution, a certain database has not been agreed upon yet, but the functionality of the application will depend on the functionality of the database. Moreover, login pages of institutions will be routed into the app, in order to confirm the identity of the faculty using the app. Everything else on the software should be stored on the mobile device itself, which can communicate with the database servers regularly to pull and send information.

# Functional Requirements

1. The application must interact with institution login pages to confirm faculty identity.
2. User must be able to create an attendance sheets for a class.
3. *Attendance sheets must contain the following: Student name, student ID, date, subject, and a button to mark each student’s absence. Attendance sheets can be shared using email.*
4. By default, each student is marked present until the user marks otherwise.
5. User must be able to add/remove students from a specific class. If a student cannot be found in the database, it must show an error window indicating the issue.
6. User must be able to indicate whether a student is absent or not with a single click. There should be no room for invalid inputs.
7. *User must be able to view the attendance record of every student throughout the semester, along with a more detailed view to show attendance over a specific period of time. Professors users can modify attendance records in the case of mistakes.*
8. User must be able to create multiple lists, each for a different class with different students.
9. On each attendance list, the user must be able to search for a specific student by name or student ID, and view their attendance record. Students not in the specified attendance sheet should show an error message to a user.
10. Attendance information is stored on the User’s phone, they can manually send it to other devices using email.

# Nonfunctional Requirements

1. Software must run with full functionality on any mobile phone or tablet running Android 11.0 (Red Velvet Cake) or higher.

1. Software must occupy as little space as possible on the user’s phone. The code must be optimized for complexity.
2. Software must run on the user’s phone efficiently, with each action not taking more than a minute to complete.
3. Software must be able to confirm the identity of faculty using the application.
4. Attendance information must be secure and only accessible by institution faculty members.
5. Software must be easy to use, allowing for tracking attendance with a single click.
6. The app must have simple, minimalistic interface.

# Other Requirements

N/A