Software Requirements Specification

for

Attendance System

Version 1.0 approved

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Revision History

Name	Date	Reason For Changes	Version
Savannah Sun	10/12/22	First draft of SRS	1.0

1. Introduction

1.1 Purpose

The Smart Student Attendance System is intended to facilitate the collection of daily student attendance, for use by school/ college faculty.

1.2 Document Conventions

The requirements are separated into sections based on whether or not they are functional. The words shall and should are employed to define requirements that are mandatory and non-mandatory respectively.

Each requirement is given a unique tag so that it can be identified easily, and referenced in other documents that directly reference this one.

Words bolded in the requirements section are of greatest significance, and summarize the requirement.

1.3 Intended Audience and Reading Suggestions

This document is intended to serve the design team (project managers, quality assurance members, and developers) by acting as a reference material to influence design materials. The document is best read sequentially, but sections 3 and 4 are most pertinent to members of the design team.

1.4 Product Scope

The app will include several features with the goal of eliminating effort in taking attendance within a school/ college. It will assist in the gathering of attendance information for schools and other institutions that are interested in maintaining a record of attendance (e.g. colleges, high-schools, trade-schools, etc.). This software will maintain a record of each student's name, student ID, data, and attendance record, and allow users to update all of these fields through an easy-to-use interface. Furthermore, the app will allow for student attendance list creation, attendance marking, storage and transfer of attendance sheet data, and searching and statistical options.

1.5 References

Example applications that design may follow: Attendance Taker - Apps on Google Play, Blackboard Inc., and Student Attendance Tracking with aPlus+ Attendance.

2. Overall Description

2.1 Product Users

The app is targeted towards school/ college administrators, such as teachers and lecturers.

2.2 Operating Environment

This system will be tested on Android Phones or Tablets. The minimal operating system for this app is Android 11.0 (Red Velvet Cake).

2.3 Assumptions and Dependencies

The requirements stated in this document could be subject to change at the decision of Khaled El Mahgoub.

There is a baseline assumption that the software will need online capabilities in order to access and update a cloud-hosted database. It is assumed that the database will be hosted via a commercial provider such as AWS, or Microsoft.

3. Functional Requirements

1. **SHEET :** The app shall allow the user to **create a student attendance sheet** which stores name, student ID, data, absent/present indication, and subject.
2. **ATTEN** : The app shall allow the user to **mark a student absent or present.**
3. **STORE :** The app shall **store the attendance data** for later viewing.
4. **TRANS :** The app shall allow for the **transfer of attendance sheet** data via email.
5. **SEARCH :** The app shall have a **search feature to get the attendance data of a student** by name or ID.
6. **REG :** The app shall have a **registration requirement** for faculty. Personal information required TBD.
7. **BLUET :** The app should be able to **transfer attendance sheet data via Bluetooth** (optional).
8. **ANDR :** The app shall run on **Android Phones or Tablets.**
9. **OS :** The app shall allow Android 11.0 (Red Velvet Cake) as the minimum OS.
10. **STATS :** The app shall allow users to **check absence data of a student** for a specified amount of time.
11. **ADDSTU :** The software shall allow the user to **add students to its storage** method.

12. ANLSIS : The software shall **report info to the user regarding the student's attendance** such as percentages of classes missed, overall attendance record outside of this class, and other metrics TBD.
13. EXPT_CLSS : The software should allow the user to **export a list of students** that are expected to attend a given class.
14. LOCAT : The software should support **adding a location for a given class meeting** to be displayed to the user.
15. CRED : The app shall **identify a professor's credentials for login**.

4. Nonfunctional

1. **SEC :** The app shall store **student data securely**. Metric TBD.
2. **LAUNCH :** The app shall **open within 5 seconds**.
3. **FEEL :** The app shall have a **look and feel suitable** to users. Metric TBD.
4. **SENSE :** The app interface should **allow users to perform desired actions.** Metric TBD.
5. **QUICK :** The app shall **transfer attendance data in under an hour**.
6. **PERFORM :** The app shall not exceed 10 seconds between an input to the software and its desired output.
7. **REDNDT :** The software should use a redundant **storage method** in order to maintain reliable operation during outages with the data storage method.
8. **DPLYMNT :** The software should be **released** and updated through a **standard store page**.
9. **AVAILABLE :** The software shall be **accessible 24/7**.

5. Other Requirements

TBD