Software Requirements Specification

for

Announcements Application

Version 1.0

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1. Introduction

1.1 Purpose

In this document we describe the software requirements for a yet unnamed mobile application, further referred to as the announcements app (AA). AA is being developed for use in the college administration system. This document will explain the purpose and features of the app, the interfaces of the app, what the app will do, the constraints under which it must operate and how the system will react to external stimuli. This document is intended for both the users and the developers of the application.

1.2 Intended Audience

This document is intended for use by the development team, users, the clients and the Staff for validation. For the development team, the documentation provides as insight into how the development and design must be initiated; the different phases have been elaborated in a high level. The inter-dependencies and constraints between different components and different users of the software portal have been expounded. The documentation can serve as good baseline for starting off the initial phases of development on a firm level. Coming to the Users of the portal, the various responsibilities and privileges of different classes of users have been set forth. Specific instances of interaction between users through the portal have also been enlisted. The Clients are presented with similar information; i.e. regarding the overview and features offered by the product. Lastly, the SRS is also for the Staff to evaluate for the purpose of the Project documentation requirement.

1.3 Product Scope

- Viewing announcements and events within the university instantly.
- Services are generic and are designed for everyone in the university.
- These services are conveniently grouped and developed specifically for use on your Android device.

1.4 Overview

The next section, Overall Description, of this document gives an overview of the functionality of the product. It describes the informal requirements and is used to establish a context for the technical requirements specification in the next section. The third section of this document, Specific Requirements, is written primarily for the developers and describes in technical terms the details of the functionality of the product. Both sections of the document describe the same software product in its entirety, but are intended for different audiences and thus use different language.

2. Overall Description

This section describes the functions, aims and objectives of the projects. It also includes the constraints and requirements of the project.

2.1 Product Perspective

The AA an android application project which will be useful for college students and faculty. At present the academic notifications are released by the university and displayed on the notice board of the college or department, or should be viewed through university website, or are sent via Whatsapp messages or email. The students need to check the web page or notice board for each and every activities of the university. It is very difficult for a student to refer to university website on a daily basis. It is also inconvenient and inefficient to have announcements/notices from colleges scattered on various platforms. To resolve this issue, an android application is developed and this application is mainly for college students to get the information about daily tests, university examinations and any kind of academic related information. In this project the students, faculty & staff are registered by the admin. The staff of the particular department will upload the exam timetable, links for materials in this app by their own login id. The faculty, and even possibly the heads of the various clubs can create events using a specific login id. Using this app the student will automatically get the announcements made by the administration, departments or clubs. This will benefit both students as well as the college.

2.2 Product Functions

The product will be able to perform the following functions:

- User can view various types of announcements and events.
- App has multiple tabs for different types of announcements, which provides ease of navigation.
- User can log in as admin.
- Admin can post or delete announcements and events.
- User can add favourite clubs and department to navigation drawer.

2.3 User Classes and Characteristics

Broadly, there are two classes of users that interact with the application - The Administration, department faculty, club heads, event heads and other users.
Different classes have different permissions of use:-

- The Administration, Department faculty, Club Heads and Event Heads: This class of users has privileges to publish and delete announcements and events only in their respective sections.
- Other users can only view these announcements and events.

2.4 **Operating Environment**

This application will be able to run on phones or tablets with android operating system 21 or higher.

2.5 **Design and Implementation Constraints**

The online database is currently being hosted using a free service, so the number of users that the app can handle is limited. To eliminate this constraint, the online database can be shifted to a/n appropriate hosting service.

2.6 **Assumptions and Dependencies**

The device on which the application is installed requires an active internet connection for the application to be able to run.

3. External Interface Requirements

3.1 **User Interfaces**

- General announcement Tab
- Department announcement Tab
- Events announcement Tab
- Club announcement Tab
- Admin Login Tab
- Add announcement Tab
- Add favourites Tab
- Navigation Drawer
- Bottom navigation drawer

3.2 **Hardware Interfaces**

- An Android phone or tablet.

3.3 **Software Interfaces**

- PLATFORM: Android SDK Framework
- IDE: Android Studio
- TECHNOLOGIES USED: Java, XML
- DATABASE- SQLite, Firestore

4. Functional Requirements

4.1 Use case 1 : View General Announcements

4.1.1 Primary Actor : User

4.1.2 Description : User can view general announcements made by the administration from the general announcements tab.

4.1.3 Prerequisites : Device must be connected to the internet.

4.1.4 *Main Success Scenario* :
- User clicks on general announcements button in the bottom navigation bar
- App takes the user to general announcements tab where user can view announcements made by the administration.

4.1.5 *Exception* :
- If not connected to the internet, cached announcements are shown

4.2 Use case 2 : View Department Announcements

4.2.1 Primary Actor : User

4.2.2 Description : User can view department and course announcements that are uploaded by the department faculty and HOD.

4.2.3 Prerequisites : Device must be connected to the internet.

4.2.4 *Main Success Scenario* :
- User clicks on department button in the bottom navigation bar
- App takes the user to departments tab
- User can select the desired department
- App then takes the user to the selected department's announcements tab where user can view department and course related announcements

4.2.5 *Exception* :
- If not connected to the internet, cached announcements are shown

4.3   Use case 3 : View Club Announcements

4.3.1   Primary Actor : User

4.3.2   Description : User can view club announcements that are uploaded by the club heads.

4.3.3   Prerequisites : Device must be connected to the internet.

4.3.4   *Main Success Scenario* :
● User clicks on clubs button in the bottom navigation bar
● App takes the user to clubs tab
● User can select the desired club
● App then takes the user to the tab where user can view the selected club's announcements.

4.3.5   *Exception* :
● If not connected to the internet, cached announcements are shown

4.4   Use case 4 : View Event Details

4.4.1   Primary Actor : User

4.4.2   Description : User can view event announcements that are uploaded by the event heads.

4.4.3   Prerequisites : Device must be connected to the internet.

4.4.4   *Main Success Scenario* :
● User clicks on events button in the bottom navigation bar
● App takes the user to events tab
● User can select a highlighted day in the calendar (Days that are not highlighted have no events on that day)
● App then takes the user to a list of events happening on that day.
● User may pick any of these events
● App takes the user to the details for that event.

4.4.5   Exception :
● If not connected to the internet, cached events are shown

4.5   Use case 5 : Add favourites to navigation drawer

4.5.1   Primary Actor: User

4.5.2   Description : Users can personalize their navigation drawer for easier access to the course, events and clubs they are interested in.

4.5.3   Prerequisites : Device must be connected to the internet.

4.5.4   *Main Success Scenario* :
   ● Users add their favourites to the navigation drawer by clicking on the add button in the bottom navigation drawer
   ● The user is taken to a tab with courses, events and clubs
   ● Users may choose any one
   ● Users can view their selected options in their navigation drawer.

4.5.5   *Exception* :
   ● If not connected to the internet, Favourites will not be added

4.6   Use case 6 : Admin Login

4.6.1   Primary Actor : Admin

4.6.2   Description : Admin can login with unique username and password to access privileged features of the application such as adding and deleting announcements.

4.6.3   Prerequisites : Device must be connected to the internet.

4.6.4   *Main Success Scenario* :
   ● User opens navigation drawer
   ● User clicks on admin login button.
   ● User enters login details

4.6.5   *Exception* :
   ● If not connected to the internet, Login failed error will be shown.

4.7   Use case 7 : Add/Delete Announcements

4.7.1   Primary Actor : Admin

4.7.2   Description : Admin can add/delete an announcement to the application. Depending on the admin, different types of announcements can be added.

4.7.3   Prerequisites : Device must be connected to the internet, User must be logged in as admin.

4.7.4   *Main Success Scenario* :
   ● Admin clicks on add/delete announcement button in the navigation drawer.
   ● Admin enters details of announcement to be published/removed

4.7.5 *Exception* :
- If not connected to the internet, login will not be possible hence no announcements can be added.

4.8   <u>Use case 8 : Add/Delete Events</u>

4.8.1   Primary Actor : Admin

4.8.2   Description : Admin can add/delete an event to the application. Depending on the admin, different types of events can be added.

4.8.3   Prerequisites : Device must be connected to the internet, User must be logged in as admin.

4.8.4   *Main Success Scenario* :
- Admin clicks on add/delete event button in the navigation drawer.
- Admin enters details of event to be published/removed

4.8.5   *Exception* :
- If not connected to the internet, login will not be possible hence no events can be added.
- If an event has overlapping days with the same venue, the application will not allow the addition of this event.

5.   Other Non-functional Requirements

5.1   **Security Requirements**

Security requirements place restrictions on the use of this application by different classes of users.

- Users require a unique username and password to login as admins.
- Admins are restricted by the type of announcements that they can post. For example, club heads can only publish announcements for their respective clubs, while the college administration can publish any type of announcement.

5.2   **Software Quality Attributes**

5.2.1   *Reliability* : The app will run on any android device with the minimum operating system requirement. The minimum sdk is 21.

5.2.2   *Availability :* The app will be available to use as long as the device is connected to the internet. Data stored on the mobile from the last connection can be seen.