Software Requirements Specification

for

TopNotes: An Android Notes Sharing App

Prepared By-

Amit Kishor Raturi(BT16CSE057)

Arvind Negi(BT16CSE052)

Sohan Kathait(BT16CSE061)

Dept. Of Computer Science & Eng.

February 04, 2019

Table of Contents

1. Introduction

1.1 Purpose

The purpose of this SRS document is to is to specify the functionality, performance and interface requirements of the TopNotes (An Android Application) which is to be used by the students, faculty to exchange study material such as lecture notes, ebooks , lecture slides etc. All of the required features of the software project expressed by the client and agreed upon by the development team shall be expressed in this document.
Additional requirements of the client shall first be agreed upon by the development team. The formal release version of the project shall meet every requirement listed in this document.

1.2 Definitions,Acronyms, and Abbreviations

- Android: A popular operating system for smart phones.
- App: An executable form of the software product
- GUI: Graphical User Interface. An interface that receives and reacts to the user input with a graphical display.
- Java: Java is a programming language originally developed by James Gosling at Sun Microsystems. Java is a general-purpose, concurrent, class-based, object-oriented language that is specifically designed to have as few implementation dependencies as possible.
- XML:(Extensible Markup Language) is a markup language that defines a set of rules for encoding documents in a format that is both human-readable and machine-readable
- OS: Operating System
- SRS: Software Requirements Specification.
- Firebase:Firebase is a mobile and web application development platform developed by Firebase, Inc. in 2011, then acquired by Google in 2014.

1.3 Project Scope

The TopNotes is an android application for College students to exchange study material among themselves. The application offers various operations like downloading the study material uploaded by others, uploading study material and rating study material. These services are conveniently grouped and developed specifically for use on an Android device. All the operations can be performed when an internet connection is available. Users of the application can register themselves choosing their university and college to be approved by the admins for the particular college to fully experience all services provided.

1.4 References

- Android Documentation : https://developer.android.com/docs/
- Android Application Quality Guidelines : https://developer.android.com/docs/quality-guidelines/
- User Interface guidelines : https://material.io/design/guidelines-overview/
- Firebase Service guidelines : https://firebase.google.com/docs/android/setup

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 TopNotes is an android application which will be useful for college students and faculty .At present the faculty and students can share the relevant study material available in the digital form , online studying resources, lecture notes etc manually or by using emails and real time chat applications like Whatsapp, hike etc. It is very difficult for students to to manually exchange the study material or use the distracting apps like Whatsapp to do so on daily basis.

To resolve this issue an android application is developed and this application is mainly for college students and the faculty to eliminate avoid the present scenario as mentioned above.

In this project the students and faculty are registered using the GUI provided in the android application which are to be verified by the application admin for the college. The students and faculty both can upload the study material into the relevant sections and download the study material uploaded by other users as well as using the GUI provided in the app. By this app the student will automatically get the notification when some new study material is available. This will be more helpful for the students as well as faculty also.

2.2 Product Features

Authentication: The Authenitication module takes care of authenticating the student or faculty.

Uploading Study Material: The upload module takes care of the user uploads.

Downloading Study Material: The download module takes care of the user downloads. The users can download the study material uploaded by others. The user can see the downloads in relevant sections under my downloads

Search: The Search module takes care of searching the study material by title, subject or author name.

Notifications: Users get notified when new study material is uploaded by other users.

Rate and Share: Rate module takes care of the ratings to be given by the users to the different study materials.

2.3 Operating Environment

The android application is operatable on an android phone or tablet.

3. Functional Requirements

3.1 User Authentication

After filling the details in login screen , user will be authenticated by their google account with the firebase(Use as a backend)

Input: Name, Roll Number and Branch
Output: If authentication successful then redirect user into home page otherwise authentication error message will be shown to user.
Process: Verifies the google account

3.2 Download Uploaded Notes

User can access and download all the notes which are uploaded by the students. A list of subjects belongs to his/her branch will be shown to user and user can view all the handwritten uploaded notes by clicking the subject . Also user can view the question paper , practical files and e-books of respective subject.
Input: Subject chosen
Output: List of all the uploaded handwritten notes,question papers,practical files and e-books.
On clicking any file it will start downloading and will be saved into internal storage.
Process: To retrieve details of notes from database.

3.3 Upload the study material

The users upload study material which could be in the standard formats of documents like pdf,doc or can create a reference link indicating some web address for some study material. Each upload is associated with the unique login id so the user can see their uploads in relevant section under my uploads.. After successful upload , this study material will be available to other students.
Input : Chosen file
Output: File will be uploaded into firebase storage.
Process: Uploading into firebase storage.

3.4 Rate and share the study material

User can also rate and share the study material through other sharing app. Notes will be listed according to the rating of study material.
Input: Give rating to the note
Output: Rating successful message displayed
Process: Will update the rating of particular study material in firebase database.

3.5 Search study material

User can search the notes by its title,author or subject name.
Input: Title,author name,subject name of note
Output: List of notes

Process: Retrieve all the notes that matched with the entered title,author name or subject name.

3.6   Notifications

Whenever any user will upload any study material(note or question paper or practical file) , a notification will be sent to all other user's which will notify them.
Input: File(Note) Upload
Output: Sent notification to all other user's
Process: Will invoke cloud function.

4.   Other Nonfunctional Requirements

4.1   Performance Requirements

- App should run on the all android phones having Api level greater than 15,
- App should be generalized means it will also support the Tablets,
- CPU and Power consumption by the app should be as minimum as possible,
- Push Notifications should be there.
- App must provide a smooth and interactive GUI for a good user experience,
- App must be integrated with the other apps like PDF viewer, CAMERA etc.
- Search functionality should be efficient.

4.2   Safety and Security Requirements

- Every student need to be authenticated in order to use the application, since the app contains different colleges in the database it is required for a user to choose his college from the list in order to get notes from the particular college.

- In order to publish a notes user must upload the notes and send a request to admin, after the verification of the content , admin can allow or denied or edit the notes. Useless notes can be eliminated in this way.

- A privacy policy field should be there within the app that will describe the privacy and policies of the app and other terms and conditions that a user needs to agree with. Without this agreement user can't access the available content.

4.3   Availability

- The application will run 24 X 7 if internet connection is available.

- If internet connection isn't available then user can access the offline content and the content saved by the user.

4.4   Maintainability:

Maintenance is one form of change that typically is done after the software development has been completed. As the time changes, so do the needs. It revolves around the understanding of the existing s/w and the effects of the change. This application needs a timely updation of information table of the database by the admin. Any other feature as per the requirement can be added any time by the admin.

4.5   Portability

As this is an android app we can say that it is portable, user can carry his phone along with him or he can transfer the app form one phone to another both make no difference. Hence the product is portable.

4.6   Future Requirements

As this app can be used by any college , in future depending upon the active users of the app, different version will need to be published i.e Paid version or Unpaid version or ad-Free version etc.
A different and more reliable authentication process may required in future.

5 Appendix A: Issues List

1. For the time being **Feedback section** need not to be implemented and will be implemented after the other core functionality.
2. Other sign In methods like **facebook/twitter/linkedIn/Phone Verification** can be included after several updates.
3. User profile section isn't required any data for time being, and can be updated later on.