Software Requirement Document

**Instant MMLS Notifications**

Software Requirements Specification

1.0 Overview

Multimedia Learning System (MMLS) is Multimedia University’s (MMU) online learning portal, functioning as an online bulletin board for students to view course notes, assignments and announcements. Posting of updates on MMLS are a common practice among lecturers, as it is common for students to monitor MMLS for updates. Although MMLS is a convenient way to access course materials and view updates, the lack of notification system means that users have to periodically monitor MMLS for new content and updates.

Notifications provide convenience to users by providing real time updates when something new is released. The MMLS main page, where all the announcements can be viewed, retains all the updates made, even though they may no longer be useful. The average student has 4 classes in a trimester, and with multiple announcements in a week, there exists a possibility to miss an announcement as weeks go by and the main page becomes cluttered.

The proposed systems main function is to push notifications to the user when there is a new announcement or new content available. As such, students are able to remain up to date on new postings and updates on MMLS.

2.0 User Requirements

MMU students are the main target users for the system. The users will be able to receive notifications when there is a new announcement or new content available: lecture notes, tutorials, assignments. The user will select the update frequency, a period between 5 to 30 minutes, in which the application will scan MMLS for updates. The notification has two options, one to dismiss and another to view the message. If the user chooses to view the message, the user’s default browser will be used to display the message on MMLS. Additionally, the user will be able to ‘share’ the notifications on social media platforms such as WhatsApp to notify other students.

Due to limited connectivity concerns, whereby the user does not have a data plan, the application has an ‘offline’ mode which allows users to view previously received updates without internet connection. In offline mode, the user will be able to search and sort through the update history and ‘star’ important posts for future reference. Most students may need to recheck a single post multiple times and this functionality serves to handle that demand without navigating through MMLS.

3.0 Functional Requirements

Functional requirements are the functionalities that must be applied to the system. The requirements for the application are:

1. The application is able to access MMLS and detect when there is new data.
2. The application allows users to set the update frequency and will periodically check MMLS according to the users setting.
3. The application will immediately check MMLS for updates if the periodic check is not successful due to no internet connection.
4. The notification has three action buttons – one to dismiss, one to share and another to display the entire message in MMLS:
5. If the ‘Dismiss’ button is selected, the push notification will be removed from the user’s lock screen.
6. The share button must be able to copy and forward the contents of the notification and the MMLS link for the specific subject announcement onto WhatsApp.
7. Selecting the ‘View Message’ button will result in the notification being removed from the user’s lock screen followed by the display of the message within MMLS on the user’s default browser.
8. The application is able store announcements and updates locally.
9. The user shall be able to search through the locally stored announcements and updates.
10. The user shall be able to sort the locally stored announcements by subject, week and content type (announcements or content).
11. The user shall be able to select and ‘star’ selected updates which will be pinned on top of the message board.
12. The user shall be able to delete locally stored announcements.

4.0 Technical Requirements

* + 1. The application only runs on Android.
    2. The application should run in the background.
    3. The application should be able to access MMLS using a script.
    4. The application for users should utilize minimum amount of resources – CPU, memory and battery

5.0 Design Constraints

The mobile application will run on the android platform and the development is based on Java. Therefore, it has to rely on Android APIs, SDKs, plugin and development tools. As the application data is generally text-based which uses minimal storage, the application storage is designed to be local.

For the first release of the application, a limited number of features will be implemented. Further modification and expansion will be done in later releases.