

Location Based Task Reminder Android Application

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Abstract – The reminders used these days will only remind the user based on time. The main purpose of this application is to allow users to create reminders based on the location, not only time, and to notify users with those reminders automatically when are close to the location specified. It is beneficial if the notifying alarm triggers when the user is actually present near or at that specific location. By using this application the user will have the option to be reminded based on time or based on location. To serve the purpose, implementing an application for Android-based smart phones which is not only time based but also location based. Timely reminder reduces chances of missing the location of interest & task to be reminded can be performed on desired time or at desired location. This application will minimize the effort that the user has to put into getting tasks done.

Key Words: Location based reminder, Task reminder, GPS, Android, Mobile Application.

1. INTRODUCTION

In spite of leading extremely busy lives people these days still use a paper and pen to remind themselves of the tasks that are to be done or rely on their mobile to remind them of the tasks at a particular time. In times like these, location based task reminder systems can be very helpful. There are two categories to task reminders

- Time based task reminder system
- Location based task reminder system

In time based task reminder system the user would have to specify the task that is to be completed and the time that the task should be done in. This will be useful for the users to which time is a necessity.

In location based reminder system the user would have to simply specify the task that is to be done and the place where it has to be done at. The application will remind the user of the task that is to be done when the user is at a 5km radius of the place specified. In case the user is not in a 5km radius to the place specified for more than 2 days, the user is notified.

In addition to this the users are notified of the weather at the place specified and is asked if the user wants to continue with performing the task in spite of the weather. The important point of interests such as ATMs, Restaurants that are nearby are shown. The application will also consist of a dashboard that

will contain all the details about the tasks that have been completed, pending and in progress.

2. PROBLEM DESCRIPTION

Most of the reminder applications available in mobile phones today are time and date based in which the user has to save the date and time of when the user wants to be reminded about the task that is to be completed. Because the system is purely based on time the users will have to perform the task irrespective of their current location. The user will only be reminded once about the task and the task will disappear irrespective of whether it has been completed or not. Such a system might not be very user friendly.

3. RELATED TECHNOLOGY

3.1 Android Operating System

Android studio is the official integrated development environment (IDE) for Google's Android operating system, built on JetBrains' IntelliJ IDEA software and designed specifically for android development. A rich layout editor that allows users to drag-and-drop UI components, option to preview layouts on multiple screen configuration. The Android SDK provides API libraries and set of developer tools which are necessary to build, test, and debug an android application.

3.2 SQLite Database

SQLite is a open source SQL database that stores data to a text file on a device. Android comes in with built in SQLite database implementation. Android SQLite combines a clean SQL interface with a very small memory footprint and decent speed.

4. METHODOLOGY

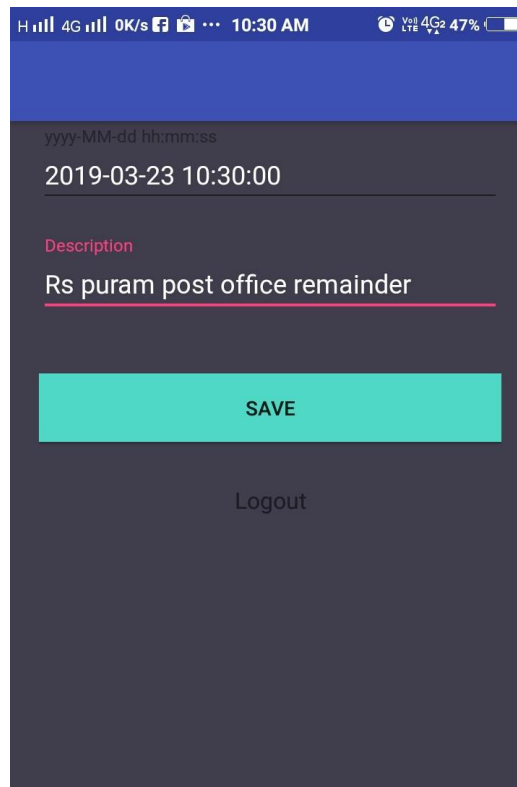
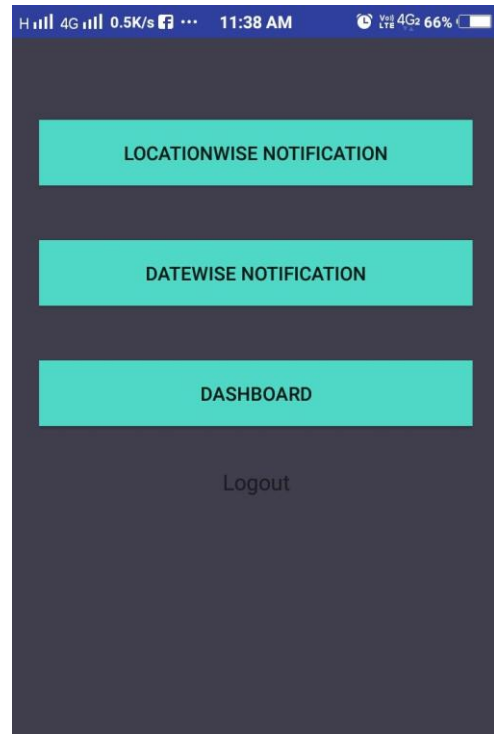
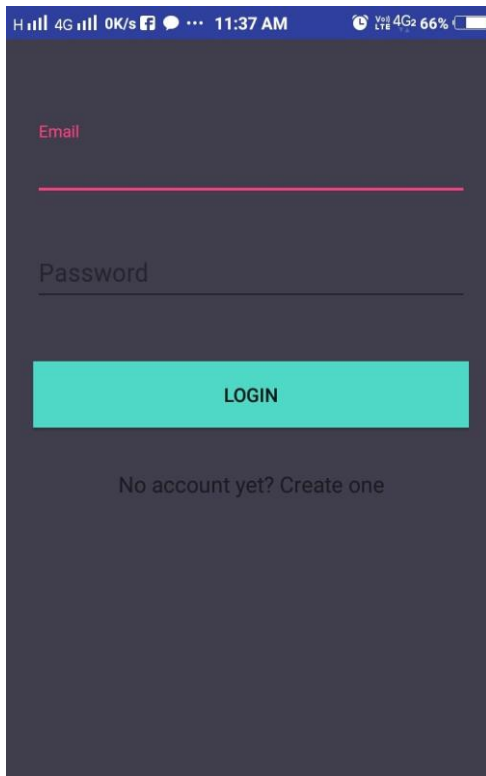
Every user will be given two options initially, they can choose between using the time based task reminder or the location based time reminder. If the time based app reminder is chosen the user will have to give two inputs which are the task that is to be done and the time that it is supposed to be performed in. This data will be stored in the

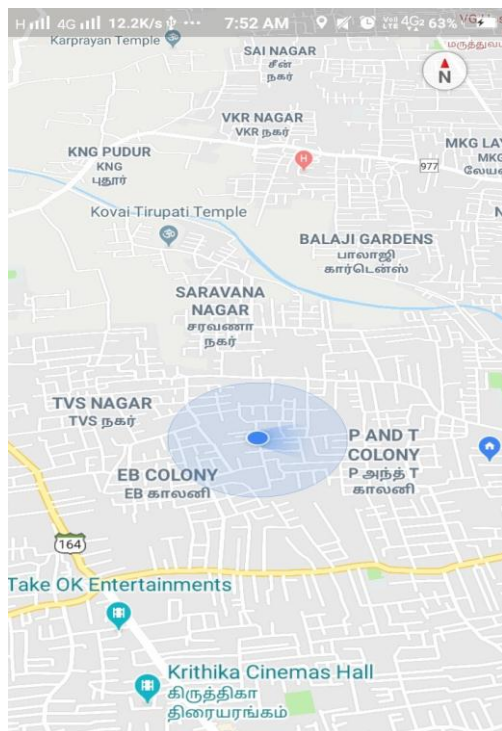
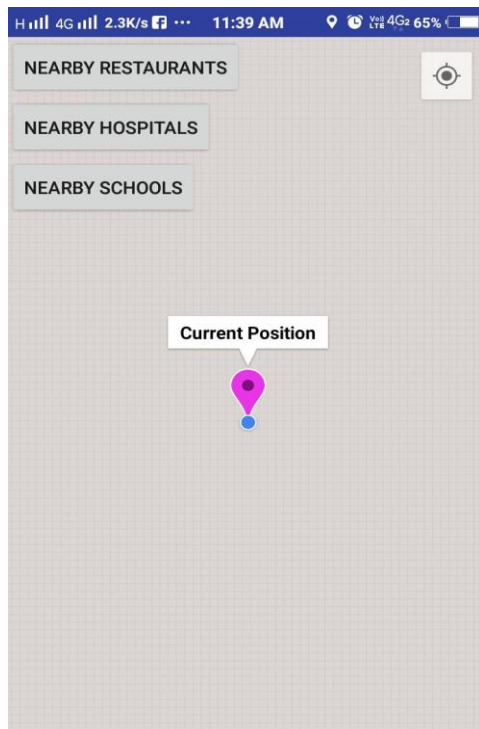
database and will appear on the dashboard along with its status. If location based task reminder is chosen, the user will have to give inputs such as- the task that is to be performed and the location in which it has to be performed in. Then the user will be notified if they are in a 5km radius of the place that is specified.

The user interface is designed using android studio in XML language. The functionalities of the interface are coded in java in android studio.

Google APIs are used to display directions, point of interests and weather at the destination.

4. USER INTERFACE DESIGN





5. ADVANTAGES AND DISADVANTAGES

5.1 Advantages

This application reduces the effort that each user has to put in to perform a given task. Since the user has the option to choose between both the time based task reminder and the location based task reminder, the experience can be customized by the user, hence making the application more user friendly.

5.2 Disadvantage

If the user is never in a 5km radius to the place where the task is to be done, the application will remind the user every second day. Even so, some tasks might never be completed.

6. CONCLUSION

With the dawn of mobile world communication, the use of smart phones has shown a steep rise, android being the majority operating system in the smart phones. Having such an application on smart phones will help in easing the day to day lives of users. It minimises efforts that are put into getting tasks done and efficiently manages each task, optimizing the time that is spent on performing the task.

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