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Location based Voice Reminder

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Abstract - Location based voice reminder is an android application with an easy to use user interface that enables the user to set reminders with respect to a location. Google maps API and text to speech API are used to capture live location of the user and to give them a voice reminder with a default text notification respectively when the user is present at the location where reminder was set.

Key Words: Android, Kotlin, GPS, TTS, API

1. INTRODUCTION

There are many instances in the everyday hustle where people pass through a particular location where they could perform a certain task but forget to do so and would want an application to remind you about a task/activity when they are in close vicinity to the location where the task/activity could be performed. Another issue in traditional reminder apps is that reminders are given out using text notification which the user misses out on if they are driving/riding or the text is too much to read at a glance. To solve these two issues, we propose our app "A Location Based Voice Reminder".

There is a wide variety of applications that are available on various platforms that help us set reminders with respect to time and date only. Some applications do provide features to set reminders with respect to location, but do not provide voice based reminders to the user at the same time. To counter this problem, we use the google TTS (Text-to-speech) API (application programming interface) in our application to provide the user a voice reminder along with a text notification. Additionally, the Google Maps API is used to track the user's current location and when the user is in the vicinity of the location where the reminder was set, the app triggers the voice and text notification. Our app provides the user with the feature of setting multiple location options for the same reminder. The reminder and user account information is stored in an integrated firebase database which also allows users to synchronize their reminders across multiple devices.

2. OVERVIEW

Several applications are available on the web and mobile platforms that allow users to set time and date based reminders. These applications rely on the user's foresight to set reminders rather than reminding them whenever it is convenient to the user. An application that reminds the user of an uncompleted task when he/she is in proximity of certain locations and at specified time intervals would be substantially more useful to users. Most of the applications available in the market today rely on standard text based push notifications to remind users of their tasks however these cannot convey large amounts of detailed information and require the user to manually navigate to the application where more information can be displayed. Voice based reminders could do away with this problem by quickly intimating the user with all the task related information without the need for explicit manual actions by the user.

3. LITERATURE SURVEY

[1] This paper describes an android application and uses the Google Maps API. The main objective was to develop a GPS based application to handle the following requirements- To alert the users through an alarm, a user not only gets reminded (notification) but also the application performs some tasks on behalf of the person when he/she arrives is in the proximity of the location. The drawbacks include less reliability, single reminders at one location, no customizations available and less ease of access to the application and location.

[2] This paper targets an android application for location based reminders and friendly suggestions. When a friend is in a proximity of 1 kilometer area, the user receives a notification alert. The drawbacks include no task reminder, a maximum proximity is set to 1 kilo-meter and no voice reminders.

[3] This paper has social network capability proposed with the Alert Me Please (AMP) application on Android operating system. AMP is designed to be an easy-to-use application with the main goal of helping users to manage their schedule. The interface design is not intuitive and easy to use.

[4] This paper describes an application system that saves the reminders with respect to both time and location. The reminder can be activated with respect to location, time or both and public facilities can be found on the map by foursquare API but there are no repeated reminders and no intelligent system to set autonomous reminders based on user's previous preferences.

[5] This paper shows the usage of google maps, places API and Amazon web services. It has a unique feature that allows users to join groups and create reminders for the group. Preferences can be set and suggestions of nearby places is given by Google Places API. A few drawbacks include high battery consumption, no recommendations of reminders based on user's preferences or past reminders

[6] This system fetches the user's current location using Google Map, GPS and allow them to set reminder about that task on that specified location. In this way, users can add multiple task reminders at multiple locations. However, there is less reliability, lower location accuracy and no voice based reminders.

[7] This paper implements a location-based task management application for Android-based smartphones and tablets. Compared to existing applications, the main feature of this application is that users can be reminded of his/her tasks at both indoor and outdoor locations, with the aid of the built-in GPS receiver and the WLAN network interface. However, the main drawback of this technique includes low accuracy on maps, high battery consumption and reliance of network connections.

[8] This paper explains a method that allows users to create reminders based on location, not only time, and to notify users with those reminders automatically when the user is 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. However, if a user is never in the 5 kilo-meter proximity where the task is to be done, the application reminds the user every second day.

[9] The main purpose of this application is to allow users to create reminders based on the location besides time and to notify users with those reminders automatically. The application consists of three major components namely location tagging manager, reminder manager and notification manager. The drawbacks of this technique are high battery consumption, low accuracy and no reminder customizability

[10] A built-in global positioning system (GPS) receiver receives signal from GPS servers to perform Geolocationing. If task to be reminded is available in the database, it performs a comparison of the location, if the application user is physically near to the defined location, a reminding alert is given to the user about the task. There are no voice reminders and continuous pulling of the user's current location wastes system resources.

4. CONCLUSION

Through this application we intend to improvise and bridge the major gaps of existing systems as addressed above in our literature survey, by implementing a "Location Based Voice Reminder" that gives a voice reminder option along with a text notification. Our application also addresses the major concern of privacy by storing the data in encrypted from. This application does not continuously pull users location hence, there is optimal usage of battery and memory resources. Further, this application also provides an easy to use interface to create a task by allowing users to choose from an assortment of common reminder types and marks them on the map for user convenience

REFERENCES

[1] Task trigger: reminder application based on location: Prachit Patil, Kaustubh Sawant, Suraj Desai, Aditya Shinde, Mr. Manish Bhelande. International research journal of engineering and technology (IRJET) e-ISSN: 2395-0056 volume: 05 issue: 03 | mar-2018

[2] Location based notification system: Mohit M. Kanfade, Sukriya D. Ambade and Amol P Bhagat. 978-1-5386-2599-6/18/$31.00 ©2018 IEEE

[3] Alert me please: the implementation of an intelligent time-management social application: papattaranan Sinnj akroth, Varisa Sarasuk, Pasachol Musikasintorn, Tamonwan Thumrongsuttipan and Apirak Hoonlor. 978-1-4799-5573-2/14/$31.00 ©2014 IEEE

[4] Location and Time Based Reminder System on Android mobile device: Nur Rokhman, Lubab Saifuddin 2016 978-1-5090-1721-8/16/ ©2016 IEEE

[5] iDoRemind: A location-based reminder application for android: Srihari Reddy Pamulapati,Longzhuang Li 2017 IEEE 978-1-5386-2074-8/17 $31.00 ©2017 IEEE

[6] Location based task reminder system using android: Neha S Gouranna, Arpita A Chitragar, Kumar Byakod, Gururaj L Kulkarni. International research journal of engineering and technology (IRJET) e-ISSN: 2395 -0056 volume: 04 issue: 04 | apr -2017

[7] A location-based personal task management application for indoor and outdoor environments: Chi-Yi Lin, Ming-Tze Hung, and Wei-Hsun Huang. 2012 15th international conference on network-based information systems

[8] Location based task reminder android application: Nethra.V, Varshini.C, Vishmitha.S, S.Jansi Rani. International research journal of engineering and technology (IRJET) e-ISSN: 2395-0056 volume: 06 issue: 03 | mar 2019

[9] RemindMe: an enhanced mobile location-based reminder application:Ali Mert Ertugrul, Itir Onal. 978-1-4799-4357-9/14 $31.00 © 2014 IEEE

[10] Location based reminder android application using google maps api: Pradnya Battin, Dr. S.D.Markande 978-1-5090-2080-5/16/$31.00