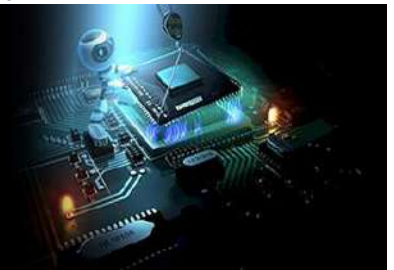


International Journal of Engineering in Computer Science



E-ISSN: 2663-3590
P-ISSN: 2663-3582
IJECS 2021; 3(1): 52-54
Received: 19-03-2021
Accepted: 23-04-2021

K Santhasheela
Assistant Professor,
Velammal College of
Engineering and Technology,
Madurai, Tamil Nadu, India

Haritha C
Velammal College of
Engineering and Technology,
Madurai, Tamil Nadu, India

Sri Devi KA
Velammal College of
Engineering and Technology,
Madurai, Tamil Nadu, India

Pooja M
Velammal College of
Engineering and Technology,
Madurai, Tamil Nadu, India

Correspondence
K Santhasheela
Assistant Professor,
Velammal College of
Engineering and Technology,
Madurai, Tamil Nadu, India

A dynamic alarm for passengers on travel

K Santhasheela, Haritha C, Sri Devi KA and Pooja M

DOI: <https://doi.org/10.33545/26633582.2021.v3.i1a.48>

Abstract

The motivation for every location based information system is: “To assist with the exact information, at right place in real time with personalized setup and location sensitiveness”. Now a days we live in an era of technology, smart phone become a part of our daily life. It is no longer a communication device only but also an essential part of our working life. In our project we have developed an android based application named “Android Location Alarm” at this application we tried to provide various location based services in one place. The app provides nearby service and it also has an alarm system that will work when user set the alarm to specific place and come near the place. The user may set, reset, disable, edit and set duration of the alarm as their wishes. User may view the destined locations on a map to check how far he/she is from the destined location.

Keywords: android location alarm, location based services

Introduction

Mobile phone is very essential in every individual's life, and it is increasing day-by-day for every age group from little children to old age people. We develop an app in android platform because android platform as a pretty good OS that not only work on mobile but also on the tablet PCs. Therefore now a day this platform is getting so much popularity. This app will be able to help searching desired locations like ATM booths, Hospitals, Shopping malls, Bus stops, Schools, Restaurants. The most unique part of our application is that you can set an alarm for your destination (where you want to go). The location based service allows software to obtain the phone's current location. This includes location obtained from the Global Positioning System (GPS). When you will reach at your location the alarm will be ringing and it will alert you that you have come at your desired location. The android app is also a navigator it gathers users current location and display real-time navigation. We hope our application will be more effective to search and get the correct locations.

Motivation and Background

There are many instances where we may want an alarm clock that doesn't ring at a set time, most notably, travel. Trains and planes get delayed, cars and buses run into traffic, and it would be convenient if the alarm would ring when we arrived at our destination, not when we were supposed to arrive. Another instance is that if the user feel sleepy while travel through the bus, train or plane then the user missed their destination. This motivates us to design a Android Location Alarm. That is, in the above instances, we would like the alarm to ring and vibrate to show a reminder when you are getting close to desired locations.

At this situation we wanted to build an app that will not only be a location alarm but also a nearby app and provide more information about location. In that case Google APIs can be a great solution implementing Google map and Google place API will be a smart way to provide such type of service. As we wanted to make a location alarm service to for picking place we can use Google place API. It is a widget provided by Google for picking place. we also display the distance between user's current location and destination. Finally we try to combine location based services in one place so that people don't have to go here and there for their desired service.

Literature Review

There exist a number of location based systems that can automatically generate alarm by using mobile phone. Examples of such systems are described as follows,

Wake App ^[1]: Wake App is a geo-located alarm that goes off when the user is about to arrive at the selected destination. Once the user select stop on the map, the map closes and the application goes into the background periodically user location using the device's GPS sensor. When the user bus enters within a pre-configured radius from the stop the user is supposed to get off (default is 1000 meters), the alarm plays a ringtone of user choice. This application is used for train or coach travellers. Pros: Straightforward and simple to use, configure custom radius around destination within which the alarm will go off, automatically increase alarm volume if set low and Cons: Can't save location for later use.

Wake Me: Wake Me is another location based alarm. It lets user to choose any location on the map and set up customizable alarms for each location and save them to be used at another time when the user ride the same route. At any time user can open the application to see how much kilometers or miles the user are away from desired stop. Optionally, it can warn the user if the device loses GPS or other location signal. Pros: Uses both GPS and network location, save multiple location for later use, use different alarm configuration for different location, speech alarm on supported phones. Cons: Cannot customize radius around destination within which the alarm will go off, very buggy with occasional crashes.

Bus stop alarm ^[2]: Bus stop alarm will let users to set a location based alarm on their phone that will go off when they get close to the preselected bus stop. The idea is very innovative in that it is the first android application to incorporate publicly available bus information and GPS in an innovative bus stop alarm system. This application allows users to take advantage of the publicly available bus data and presents it to the user as an intuitive bus stop alarm application. Pros: This application is novel because it really emphasizes the advantage of using public transportation, a user who is taking the bus to an unfamiliar place can go

with confidence that they will get off at the correct place even if they don't know exactly when the stop is approaching, a user might use the application to do work or read on the bus, another user might use this application so that they can take a power nap on the bus after a long day at work or school. Cons: No list of major/favourite locations in the application.

Mobile Location Alarm ^[3]: Mobile Location Alarm allows user to enter new alarm for a particular location and ring the alarm along with the remainder text when the user is near to the location. It allows user to edit, delete, update, enable and disable the alarms. In addition, user can see the locations on map to find out how far he is from the expected location.

Location Based Alarm ^[4]: The system is developed as 5 modules to handle the following parts. Display module: In this module the, the Google map is displayed the locations using the GPS and GPRS/3G networks available in android Smart phones. By using this module the user can set their destination and current location based on their needs of travel. And the point to point distance and traffic condition are displayed in this map. GPS interaction module: In this module the GPS interaction (i.e. the location update is changed based on their user's time limit. And check whether the GPS and the internet provider is enabled or disabled. Based on that, the alert will shows to the android notification bar in android device. Place management module: In this module the location details are stored in SQLite data storage within the android device. i.e. The visited location details are get from the location updates and stored in SQLite data storage for the user future reference. Ring tone module: Thee default five ringtones are stored within the application and also the ring tone chooser based on their user need from their audio gallery. And also it has the volume control and vibrates mode control settings in this application module.

Comparison of Techniques In Papers

Papers	Components & Techniques	Merits	Demerits
Location Based Alarm using Mobile Device	Android Google API, Android Development Tool plugin, Sun MK, GPS	i) This application could be used to find the nearest place to market, hospitals, restaurant, hotel or other show with the map and track. ii) It reminds the user about the location when the user enters some predefined location of interest in the future.	Requires GPS enable devices
GEO-ALERT a Location Based Alarm System Using GPS in Android	Global Positioning System (GPS), Google Places API, Uniform Resource Identifier (URI)	i) Alert with music or with digital voice. ii) User friendly and flexible to use.	i) Mobile must have internet facility_ ii). Android device s version must be of 4.0 or above, below this version this application will not work.
Location Based Task Reminders	Android 4.4 kitkat, Android studio tool Kit, The Java Development Kit (ODK).	i) Vibrate when mobile is in silent mode. ii). Allows the user to set multiple tasks in the same location.	i) User must start the task by clicking start option. If user forget do so, system won't provide him with the notification.
Smart Reminder Application with GPS System	Android Location API, Google Places API	i) This decreases the possibility of forgetting the task to be performed in a particular location. ii) Provides better reliability._	i) User needs to choose the profile manually after reaching to the selected location.
Real Time Location Tracking Application Based on Location Alarm	Android Application, PHP Application.	i). Whenever people visit that location, then application will itself notify the user about the to-dos at that location. ii) Faster access to the location and easily customizable.	i) This feature limits the user to a particular area, if at all the user enters an area made restricted by the admin, an Alarm will ring on the application signaling the administrator that the user isn't doing his task as told to do.

Conclusion and Future Work

The conclusion that comes out from this project is that the android is much popular Mobile OS and Tablet OS and also Android is an open source development basis. In our project location based alarm facility using that user set alarm according to location and it will alert you that you are getting close to desired location. There are several application used by one single android device in today's, almost many work done by those device. So technology brings easiest way to do everything by a mobile device through several serving application that installed.

The future application of this system is to include voice message. Voice message enhances the usability of the application. Currently, system ringtone is used as the default ringtone in the application. However, choice of ring tones could be provided from the audio gallery, since it has volume control and vibrates mode control settings.

References

1. GEO ALERT- A Location Based Alarm System Using GPS in Android, Deepika Garg, Dr. Anupam Shukla 2012.
2. Location Based Task Reminder, Indumathy M, Indumathy D, Kanagasabai K 2017.
3. Location-Based Mobile Device Alarm 2010.
4. Priyanka Shah, Ruta Gadgil, Neha Tamhankar. Location Based Reminder Using GPS For Mobile (Android), ARPN Journal of Science & Technology 2012, 2(4)
5. Seema Vanjire, Unmesh Kanchan, Ganesh Shitole, Pradnyesh Patil. "Location Based Services on Smart Phone through the Android Application" International Journal of Advanced Research in Computer and Communication Engineering 2014, 3(1) ISSN (Print) : 2319-5940 ISSN (Online) : 2278-1021
6. Real Time Location Tracking Application Based on Location Alarm, Adnaan Ghadiyali, Ankur Tikur, Sumeet Bandevar, Ruturaj Tengale
7. Location alarm, SiyamSanker MD, Hasibul Karim Shakil, Koushik Kumar Mondal
8. Bagrecha Komal S, Bramhecha Amit R, Chhajed Sneha S, Khivsara BA. Android Application Using GPS Navigation, 1st International Conference on Recent Trends in Engineering & Technology 2012.