FIREBASE BASED GPS ENABLED SMART VEHICLE SERVICE ANDROID APPLICATION

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Abstract

- The In the modern world many android applications are developed for offering different services but no application developed in the area of vehicle mechanical services.
- This motivates us to develop an android application to efficiently offer the mechanical services.

In this application we enable the service providers and users to communicate with each other.

Keywords: mechanical services, convenience, android application, efficient

Introduction

In this project, I am developing android application to provide service providers to register and update their location information in the application and allows users to register, login to the application and find the nearest service providers with their live availability using GPS, select one of the service providers then make call to them to get service in any location and also communicate with each other.

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Review of Literature

FCM's predecessor was GCM (Google Cloud Messaging. GCM has been used by advertisers to send real time messages. GCM has been updated to FCM. FCM push notification has all of GCM's features such as quick messaging with an additional feature of sending web push notifications. Developers integrate FCM in mobile and web applications to send users web-based push notifications and messaging.

How FCM works in Android Mobile Applications?

The job of the FCM is simply to deliver the notification and the message. To allow FCM push notification in Android apps, you need the following three things: a mobile application, FCM server link & a push server from a third party. How to enable RCM to push notification in Android Apps:

- ✓ Add Firebase to your Android app project.
- ✓ Get FCM registration token (API tokens/Ids).
- ✓ Configure the API tokens/Ids to the Android App.
- ✓ Establish connection with FCM servers.
- ✓ Finally, get a third-party push notification service
- ✓ so that notifications can be sent from the app to
- ✓ FCM servers.

For example, here the user gets the notification of the detailsof the available vehicle service centres with the prices of theservice within the radius of Geo-location of the user. Theuser can select the vehicle service with the price range theycan afford.

Cognitive privacy protection architecture is essential to thecognitive architecture to build a mechanism for supportingquery publisher friends to connect with LBS servers.Cognitive privacy protection architecture In this paper, twodifferent strategies are tried in different scenarios. The application sender is completely hidden from the LBS serverin one situation by not engaging in the

interaction of querywith the LBS server. In this case, the application sender willnot send the question to your LBS server but will insteadsend all queries to your social contacts. In the other case, theapplication sender will be involved in the query process andconnected with the LBS server and its social friends. Thequery issuer will also receive the query results directly fromthe LBS server. Our aim is to mask the question senderamong his/her social friends so it won't be easilyidentifiable. In order to be more precise, to restrict theprobability that in 1/(2k) the actual query issuer can becalculated (k is the number of query issuer friends).The android place finder system consists of the list of placesregistered in the device memory. It contains an admin loginwhich allows admin to enter and store tremendous amountof places in the system. After successful enter, the places getstored along with their data, location, and description in theFirebase storage. The firebase storage, when used by a user,allows users to get the notification via firebase cloudnotification (FCM).

Existing system

- ✓ In the current system has offering many android applications to offer different services.
- ✓ There is no applications are available in the area of mechanical service.
- ✓ This brings many challenges to users to get service in any location as well as service providers to increase business.

Disadvantages

- ✓ The current system requires lot of manual work to do.
- ✓ Lot of time consuming for finding the Mechanics in near distance.

Proposed system

- ✓ In proposed system, we develop “Firebase based GPS enable smart Vehicle Service App” is an Android application.
- ✓ This application enable the service providers and users to communicate with each other.

This application allows service providers to register and update their location information in the application and allows users to register, login to the application and find the nearest service providers with their live availability using GPS, select one of the service provider then make call to them to get service in any location.

Implementation Result

In this section, we describe the all the major functions of the system and we provide brief description about key functions. Finally we show the input forms and output forms of this project.

Explanation of Key Functions

- ✓ Scan Image
- ✓ Scan Handwritten Data

Android libraries

This category encompasses those Java-based libraries that are specific to Android development. Examples of libraries in this category include the application framework libraries in addition to those that facilitate user interface building, graphics drawing and database access. A summary of some key core Android libraries available to the Android developer is as follows −

android.app − Provides access to the application model and is the cornerstone of all Android applications.

android.content − Facilitates content access, publishing and messaging between applications and application components.

android.database − Used to access data published by content providers and includes SQLite database management classes.

android.opengl − A Java interface to the OpenGL ES 3D graphics rendering API.

android.os − Provides applications with access to standard operating system services including messages, system services and inter-process communication.

android.text − Used to render and manipulate text on a device display.

android.view − The fundamental building blocks of application user interfaces.

android.widget − A rich collection of pre-built user interface components such as buttons, labels, list views, layout managers, radio buttons etc.

android.webkit − A set of classes intended to allow web-browsing capabilities to be built into applications.

Having covered the Java-based core libraries in the Android runtime, it is now time to turn our attention to the C/C++ based libraries contained in this layer of the Android software stack.

Android Runtime

This is the third section of the architecture and available on the second layer from the bottom. This section provides a key component called Dalvik Virtual Machine which is a kind of Java Virtual Machine specially designed and optimized for Android.

The Dalvik VM makes use of Linux core features like memory management and multi-threading, which is intrinsic in the Java language. The Dalvik VM enables every Android application to run in its own process, with its own instance of the Dalvik virtual machine.

The Android runtime also provides a set of core libraries which enable Android application developers to write Android applications using standard Java programming

Outputs

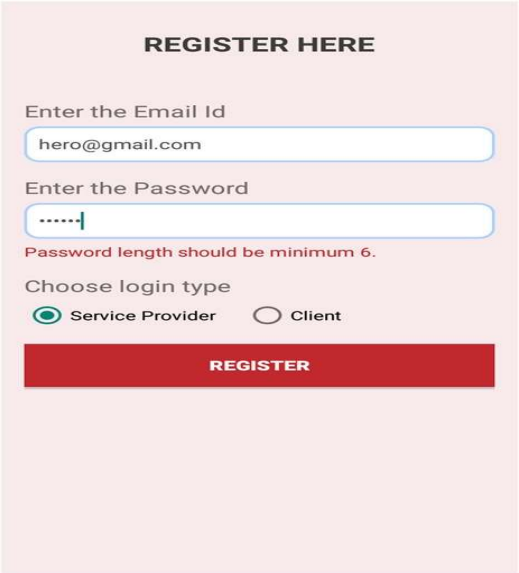

Fig1:Registration

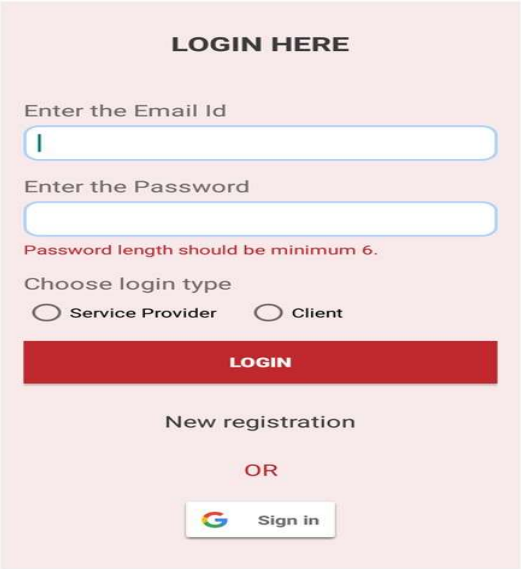

Fig2:Login

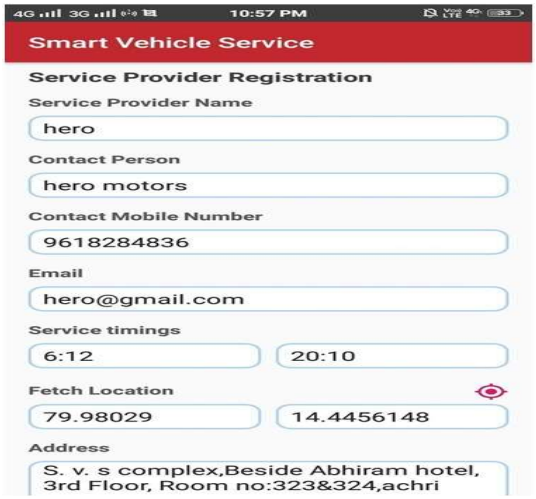

Fig:Service provider Registration

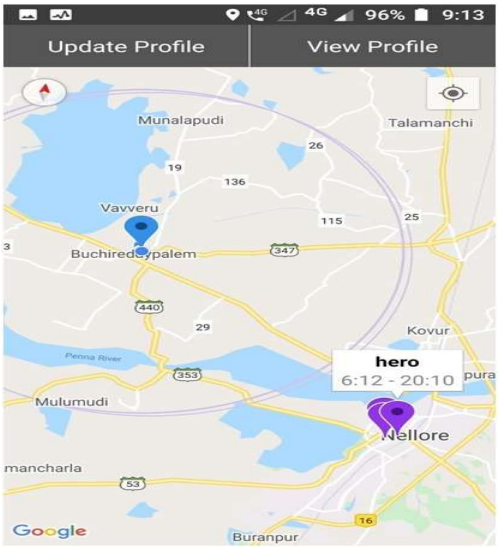

Fig: Google map Location

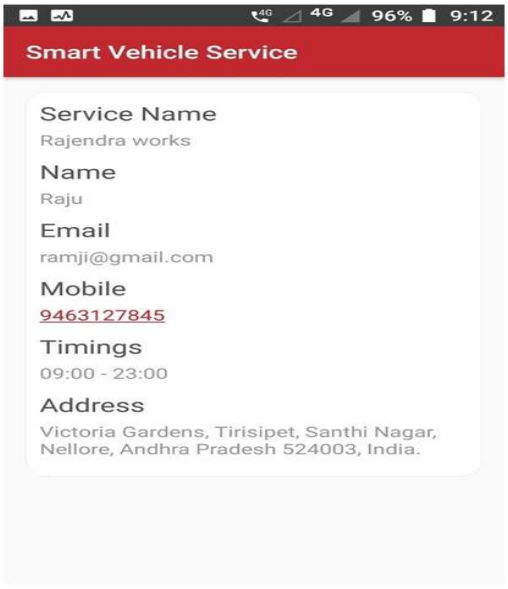

Fig: Booking Output

TEST CASES

TC No	Test Case	Input	Expected Output	Observed Output	Result
TC1	Login	Enter mobile no and password	Login Successful	--do--	Pass
TC2	Login	Enter Wrong mobile no and password	Invalid login details	--do--	Pass
TC3	Registration	Enter all Fields Data	Registration Successful	--do--	Pass
TC4	Registration	Enter some fields data	All fields are mandatory	--do--	Pass

Conclusion

In this project, I proposed and developed "Firebase Based GPS Enabled Smart Vehicle Service Android Application" is an android application in which the mechanical services are performed in an efficient manner which enables the service providers and users to communicate with each other. It is secure and efficient and also flexible to user to find nearest service providers.In future, I will add more features to my application, like, adjust the radius on google map dynamically and add feedback system to the mechanical services provider.

References

1. https://www.tutorialspoint.com/android/android_resources.htm
2. https://developer.android.com/guide/index.html
3. https://www.engineersgarage.com/articles/what-is-android-introduction
4. http://www.beginandroid.com/intro.shtml
5. http://www.gcflearnfree.org/androidbasics/intro-to-android-devices/1/
6. https://en.wikipedia.org/wiki/Android

1. Jump up to: a b Reardon, Marguertite (August 15, 2011). "Google just bought itself patent protection". CNET. CBS Interactive. Retrieved March 11, 2017.
2. ^ Jump up to: a b Perry, Douglas (July 16, 2011). "Google Android Now on 135 Million Devices". Tom's Guide. Purch Group. Retrieved March 11, 2017.
3. Jump up ^ Markoff, John (November 4, 2007). "I, Robot: The Man Behind the Google Phone". The New York Times. Retrieved February 15, 2012.
4. Jump up ^ Kirsner, Scott (September 2, 2007). "Introducing the Google Phone". The Boston Globe. Archived from the original on January 4, 2010. Retrieved February 15, 2012.
5. Jump up ^ Vogelstein, Fred (April 2011). "How the Android Ecosystem Threatens the iPhone". Wired. Retrieved June 2, 2012.
6. Jump up to: a b c d e Elgin, Ben (August 17, 2005). "Google Buys Android for Its Mobile Arsenal". Bloomberg Businessweek. Bloomberg L.P. Archived from the original on February 5, 2011. Retrieved March 12, 2017.