

Retrieving Contacts and Location of an Android Device

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Abstract - The most important requirements that should be achieved in the meantime is, providing Emergency service as soon as possible when someone needs it. Hence, the software has been developed to provide quick services for users. the main idea behind this software is to control your device remotely using SMS. This software is made for android devices which is used to fetch the contact and location of the mobile phone just by sending SMS which shows how various features in android mobiles can be automated by SMS. Various operations can be performed by users in their mobile using this application even if mobile is very far away from him, like by dispatching a single text message we can elicit and store our contact numbers, fetch our device's location, fetching SIM and mobile details used for GSM network. this application shows how various features in android mobiles can be automated by SMS. Location based services and telephony services are used to fetch location and contacts of the secondary android phone. This application is capable of taking accurate location of device using GPS. This application will provide us correct contacts and accurate location of your android device.

Keywords: SMS, Android, Telephony, Location Tracking, GPS, Contact Fetching, Tracking.

I. INTRODUCTION

Today in the era of technology we want most of the things to be self-operating, self-acting and self-regulating. Imagine that it would be great if our mobile phones are far away from us and we could perform various functions in our mobile phones or it could respond automatically like an intelligent device. With the development in technical field, mobile phone is no longer luxuries item. It's easily available and possess by most population of our country. The popular communication technology used today is SMS, MMS, GPRS and 3G. In which SMS is very common and widely used way of communication. So developing an android application in which sending an SMS to the mobile phone which is far away from us without any interception of operator and due to this our android mobile phone will act as intelligent device. A client-server relationship among mobile phones is established by this application in which the requesting operations of mobile, where sending an SMS will resemble as client and mobile serving those operations will act as server.[2] So the main operations which we are going to perform are storing and fetching contact numbers and fetching the device's location

II. OVERVIEW OF PROPOSED SYSTEM

Contacts on mobile device has a vital importance in day to day life. Each mobile user has a propensity to store their important numbers in mobile. While understanding importance of contacts we come to this solution. We can send a text SMS as a request to the mobile where the Contact is saved or we can

sync our contacts over a single centralised server which in return bring the corresponding contact number. Along with contacts we can also fetch the location of our android device by sending SMS. for retrieving location, location based services are used. This software for android mobile platform discovers various applications of SMSs over its traditional text messaging application. It shows how various features in android mobiles can be automated by SMS. By this application user can perform various operations in its mobile even if mobile is far from him, like by sending a single text message we can fetch our contact numbers, retrieving current location of an android device, send SMS from our remote mobile. Convenience to the user, efficiency and security are main issues that are considered. This application makes the use of services like native android applications and telephony. main components of this application is as follows.

Android Device:- This component will act as a client. client will initiate the system by creating his accounts and all credentials we be stored in server. this android device will send a query in a particular format to the server and server will give the response to the client.

Server : server will store all the credentials of user in his database and when client asked for a particular information i.e. contact or location the he will respond to his query by searching the contacts offline and online.

Gps Provider: when client asked for location information then this GPS provider will provide the location of the device by taking the coordinates of the location of an android device.

he will map the coordinates and sent it to the client through a SMS.

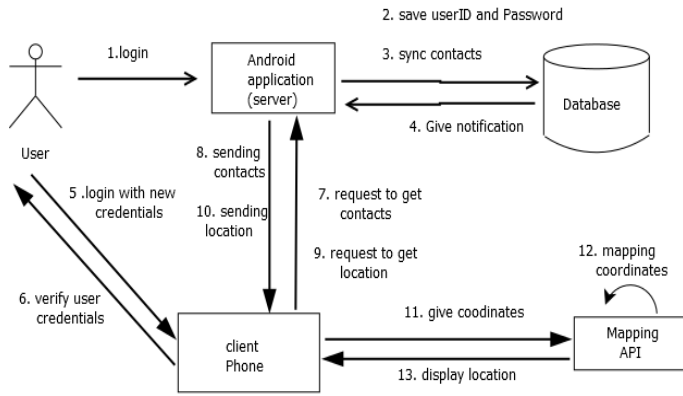


fig : Digram of Proposed Sytem
Figure 1: Diagram of Proposed system

Above diagram refers to the overall working of the system. In our system first we have to sign up, after sign up all the contacts get sync. We can fetch the contacts online as well as offline method along with that we can also fetch the location of the android device. If we want to retrieve the location of the device then we must send an SMS from the client phone to the server phone in the pre-defined format. The server phone will revert back the GPS co-ordinates to the client phone through which we can find the accurate location.

III. SYSTEM DESIGN

Proposed system is divided into two main modules. The first module is contact fetching and second one is fetching location of mobile phone. The architecture of proposed system is shown in following figure.

Contact Fetching :

Following are the sequence of the steps for fetching the contacts. The system is initialized by the user by creating his/her account .User needs to sign up with basic details such as email ID and password where email ID will be unique primary key. All the login credentials will be saved in the server and along with that when user creates his account, then all the contacts will get sync in server. At every login server will check the login credentials in the server's database if they are correct then server will give permission to access the system and if it doesn't match then he will denied the access. In case user forgets the device apart from him, and needs to receive contacts immediatly. He needs to login in other system to access contacts online. In case of absence of internet connection user has far more better approach to send an message with their id and name of contact to be fetched. Here we have kept a unique format for sending request so that security issues will be maintained. Now request is send to server to check database if its matches user requirement it will send an quick message or else it wont. There is no device barrier to send message.

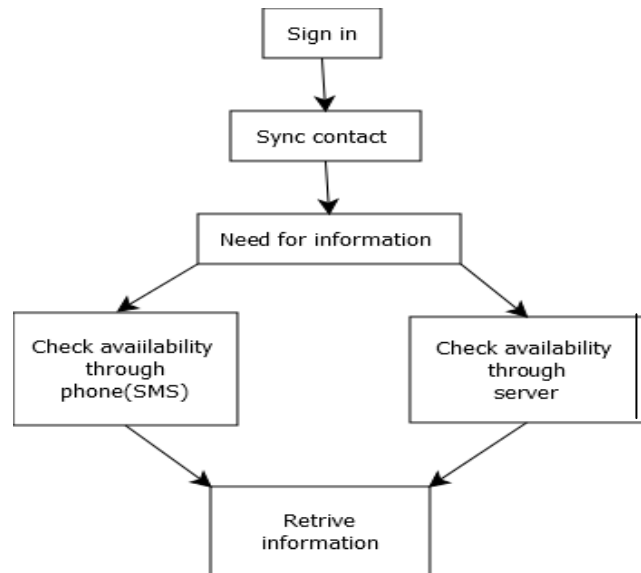


Figure 2 : Flow Diagram of proposed system for Contact Fetching

The brief description of our contact fetching module is as follows:-

In our system first we have to sign up, after sign up all the contacts get sync. When we want to fetch the contacts there are two options as shown in figure through which we can retrieve the information.

Fetching Device's Location :

Architecture of fetching location of mobile phone is as follows. in this also system is initialized by the user's mobile number and system will save 3 numbers that user know. Then the message is send to the users mobile phone querying about its location. using Location Manager's mobile phone will be able to find its GPS coordinates. The coordinates will be send to the client mobile phone using SmsManager [3]. Here we find the last location of mobile from GPS provider using getLastKnownLocation method, by passing the query in the form of SMS. In case if our mobile phone is stolen and person who got that mobile has changed the SIM card then the message is send to those 3 backup numbers that "SIM is Changed". In this way this system is useful to tack the location of android mobile. Below diagram shows the working of proposed system.

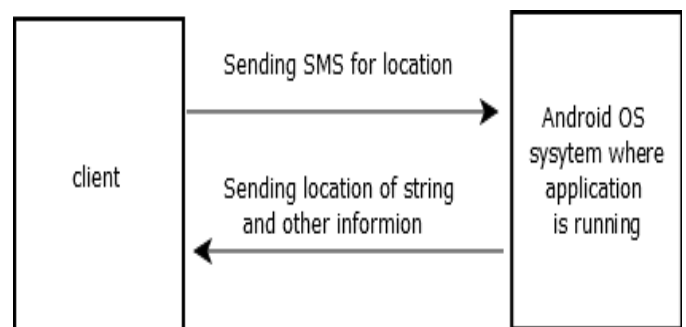


Figure 3: Flow Diagram of fetching location of an android mobile

In the above figure , if we want to retrieve the location of the device then we must send an SMS from the client phone to the server phone in the pre-defined format. The server phone will revert back the GPS co-ordinates to the client phone through which we can find the accurate location.

IV. IMPLEMENTATION

GET CONTACT :- For fetching the contacts, user needs to sign up with basic details such as email id and password where email id will be an unique primary key. There are two approaches for contact fetching

1. Get Contact offline:-

In case user forgets the device, and he needs to receive contacts immediately and it has no internet connection then how it will get the contact?. Its simple by just sending an sms from any other device in a predefined format to that device from which we want to fetch the contact. The predefined format is shown below.



Figure 4: Message Format provided in Help option

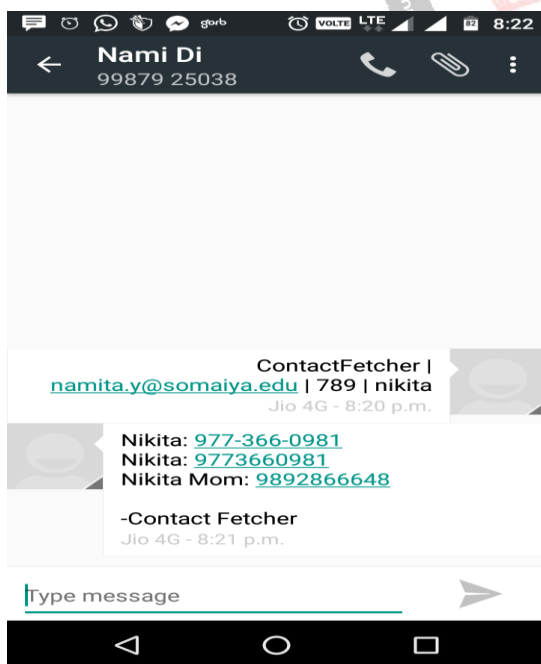


Figure 5: Demonstration of Fetching contacts by sending SMS (offline contact fetching method)

Note :- In the above screenshot the contact name can be the whole contact name or it can be also the initials or the substrings as shown below

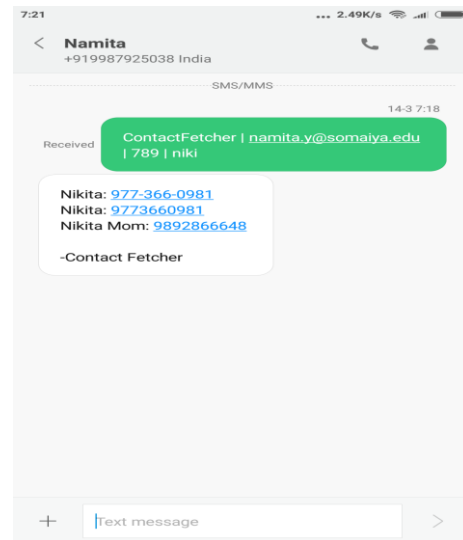


Figure 6: Demonstration of fetching Contacts with initials of name

2. Get Contact online

At every login, contacts are sync and stored on server to maintain security issues and update database. So if user has the internet connection and he want to retrieve the contact, then he can login to another system(android device) and access the contact online as shown below.

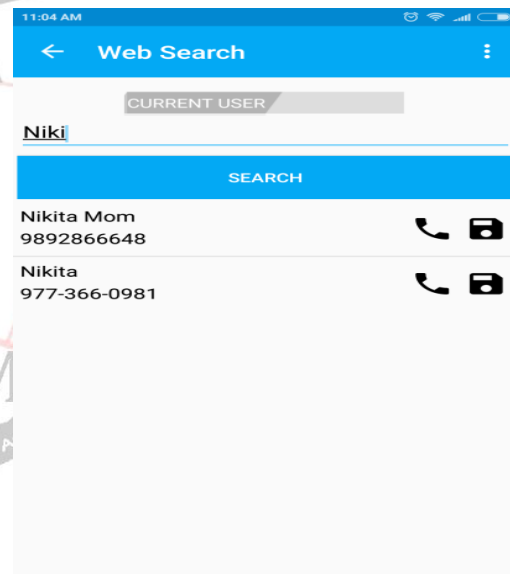


Figure 8: Demonstration of online contact fetching of current user

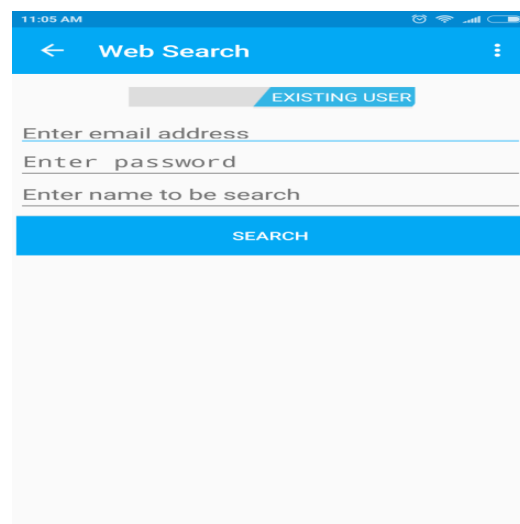


Figure 9: GUI of online contact fetching

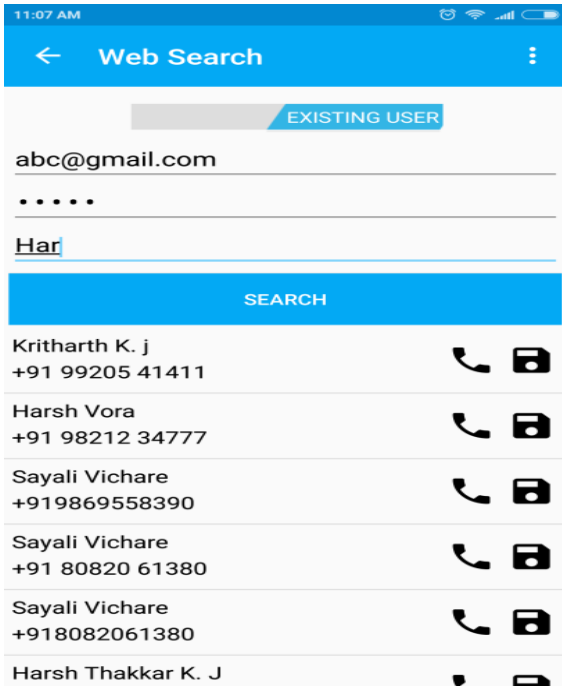


Figure 10: Demonstraion of online contact fetching of new user

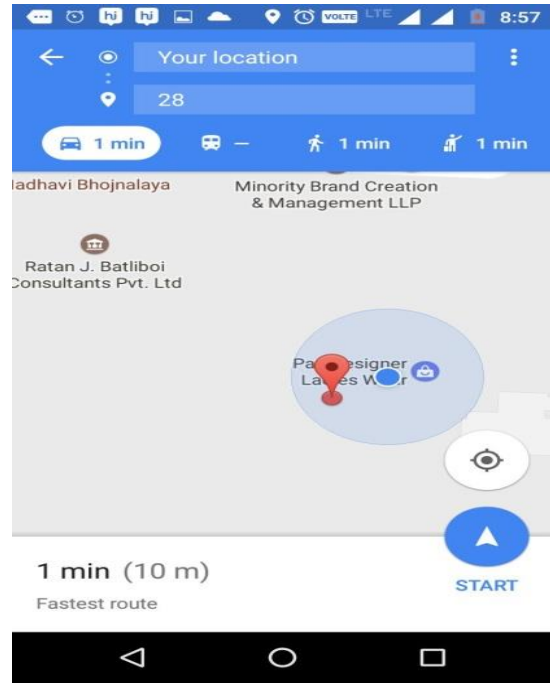


Figure 12: Demonstration of current accurate location of mobile phone in google map.

GET LOCATION:-

In case if we forgot our phone somewhere then in that case this application will give us the location of our mobile phone by sending SMS to our mobile phone .for fetching location our device one should have to send SMS in predefined format. In android location based services are use to find location of mobile phones. This application will run in background and it will scan all incoming messages ,once he get the query for finding location it will automatically send location of that device back to us in the form of GPS coordinates. this GPS coordinates are directly connected to the Google map so that it becomes easy for user to gets exact location of device.

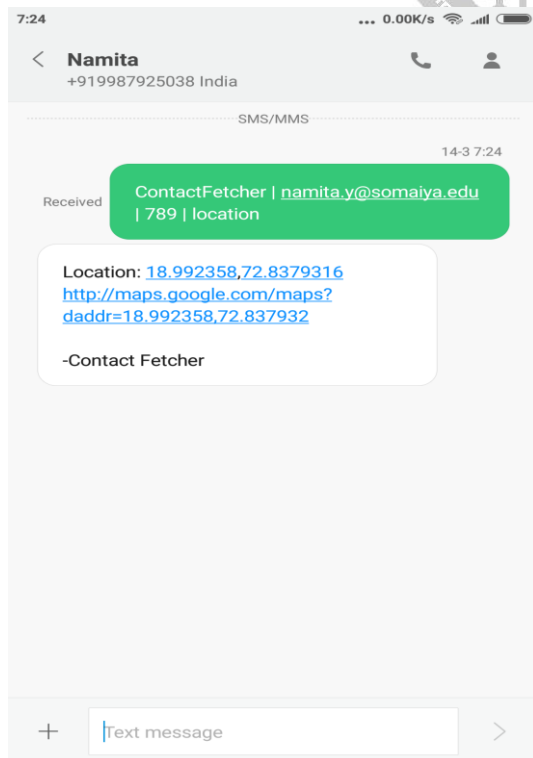


Figure 11: Query for finding location of mobile phone

V. RESULT & DISCUSSION

This system aims in providing customer an elite support to continue with their work, even in absence of their cell phone. It's an feasible, convenient and simplified solution to avoid such problems at the time when user forgets cell phone anywhere. Avoiding complications than the previously existing systems. Where user needs to follow multiple steps to retrieve contacts. Also this system can be used globally to find the location of the person in the satellite map. This will help us to find the required specific location within short period of time with shortest distance.

VI. CONCLUSION

The application is very useful in case if we have forgotten, misplaced, lost our android phone. We control our phone remotely through SMS by which we can fetch the contacts also also the current accurate location of the remote device, the SMS must be in predefined format. This software also provides excited ways of using your mobile phone using via SMS. In this application android phone act as a intelligence device which performs many function by checking incoming text message format. The best part of the system is that it has a very low memory footprint i.e. it is very light on your remote phone.

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