

Remote Data Acquisition from Android Mobile

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Abstract:

In the recent years it has been seen that mobile has become one of the most important electronic devices. Earlier to mobile devices computers played an important role doing tedious human work with less human effort. Looking at these applications, an idea for developing a new application to retrieve the data like contact details, SMS from inbox emerged. This can be done by developing an application where the Android mobile will send the requested contacts and inbox messages on receiving a SMS from other mobile phone in a defined format. It's a small effort from us to join our hands to make a user friendly and a handy tool to reduce the human effort.

Keywords—Remote Data, Acquisition, Android O.S., SMS, Contact.

1. Introduction:

It was observed that developing a specific user application was quite difficult for any user over sambaing phones. But now the latest operating system - ANDROID is an open source using which any user can develop his own application or can think of an application, which the user phone is not enabled. Some of the applications where the ANDROID phones work are as a virtual machine where the data can be transferred from mobile to mobile or in some cases from mobile to computer. Looking at these applications, an idea for developing a new application to retrieve the data like contact details, SMS from inbox emerged. We consider a scenario where a user forget to carry his Android mobile and wants to access his/her contacts and SMS from the Android mobile. This can be done by developing an application where the Android mobile will send the requested contacts and inbox messages on receiving a SMS from other mobile phone in a defined format.

The format consists of the Password, Name of the contact / the particular date.

2. Existing System:

The mobile phones were restricted only for making calls and sending SMS in the beginning, but in past few years it is seen that mobile devices also work as a multimedia device. The device not only helps to access data but it does many other tasks such as entertainment, etc. The PDA's and other such devices help the user to access any information around the globe. Some of the applications that help to access remote information are as follows:

- Weather Forecast: It is the application of science and technology to predict the state of the atmosphere for a given location. Human beings have attempted to predict the weather informally for millennia, and formally since the nineteenth century. Weather forecasts are made by collecting quantitative data about the current state of the atmosphere and using scientific understanding of atmospheric processes to project how the Atmosphere will evolve.
- Faring: faring is a centralized chat platform where one can integrate famous chat programs like Google Talk, Yahoo Messenger, Yahoo, Skype, and ICQ etc. One can make VOIP calls wherever they can get Wi-Fi network. One can also make cheap international calls through Skype at cheap rates.
- Google map: Google map application is quite useful. One can find information like turn-by-turn direction to a destination that they are seeking; get access to a local business or office.

These applications were developed for Symbian operating system phones. It was observed that developing a specific user application was quite difficult for any user over Symbian phones.

But now the latest operating system - ANDROID is an open source using which any user can develop his own application or can think of an application, which the user phone is not enabled. Some of the applications where the ANDROID phones work are as a virtual machine where the data can be transferred from mobile to mobile or in some cases from mobile to computer.

3. Literature Survey:

Consider the situation where the user has Android Smartphone, with irrespective of any work or urgency, unknowingly for some desperate reason he may forget and leave his Android Smartphone at home and then went to some remote place. He realizes that he has left his Smartphone at home itself. Then there are probably chances of missing SMS's and also missing some important contact information that might be very important for him. So he may be in need of that information's like contacts and recent SMS.

Possible Solutions:

He might travel back to his home and check those information. He may call to his home members/friends and enquire; it can be infeasible in case of absence Home members. Also, it leads to enormous wastage of time and effort and it also becomes the irrelevant/infeasible solution. Alternatively, the idea here is to help the users to get those contacts and SMS by sending simple SMS securely.

4. Methodology:

4.1 Proposed Work:

The latest operating system - ANDROID is an open source using which any user can develop his own application or can think of an application, which the user phone is not enabled. Some of the applications where the ANDROID phones work are as a virtual machine where the data can be transferred from mobile to mobile or in some cases from mobile to computer.

4.2 Design Approaches:

4.2.1 DFD Level 0

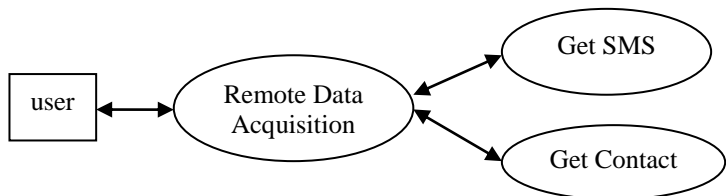


Figure no.4.2.1: DFD Level 0.

In figure 4.2.1 used for User, Remote data acquisition system and Get SMS, Get Contact. User send request to system and system send reply to user as get SMS and Get contact.

4.2.2. DFD Level 1

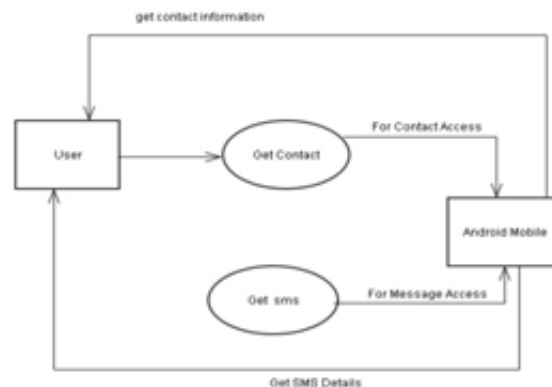


Fig.4.2.2.DFD Level 1

DFD Level 1 is used for representing User, getContact, Get SMS, Android Mobile.

4.2.3 DFD Level 2

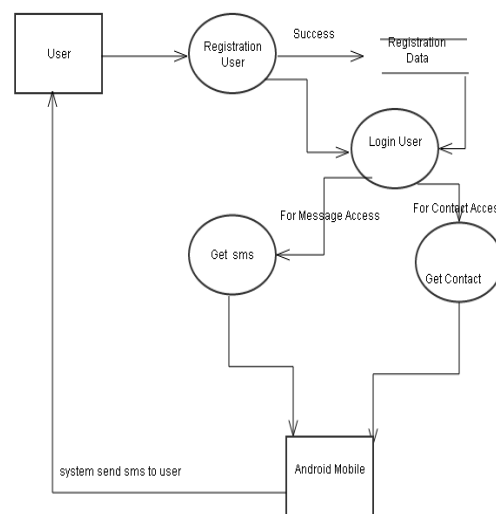


Figure no.4.2.3 : DFD Level 2

In figure no.4.2.3. used for User, Registration user, Login user, Get SMS, Get Contact on Android mobile. The user firstly registration. Then user using login page to register. If user don't successfully login then user firstly check the login name and give the correct login name and password. Then user has Successfully login. After user choose any contact name in android mobile. Then User can use this system for access the Get SMS and Get Contact from android mobile. But user must contact saved in mobile phone memory. Then user access the contact number for specific contact name in android mobile.

4.2.4 Use Case Diagram:

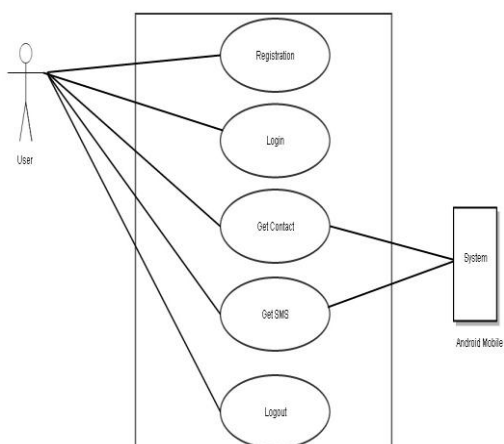


Fig.no.4.2.4 : Use case diagram

In figure no.4.2.4 used for user and android mobile i.e. system. Firstly user has registration in that give the user name, user password and re-password. Then user has successfully login by using name and password. User can access any contact number and sms in the android phone. Then user can log out after completion of task.

4.2.5 Sequence Diagram:

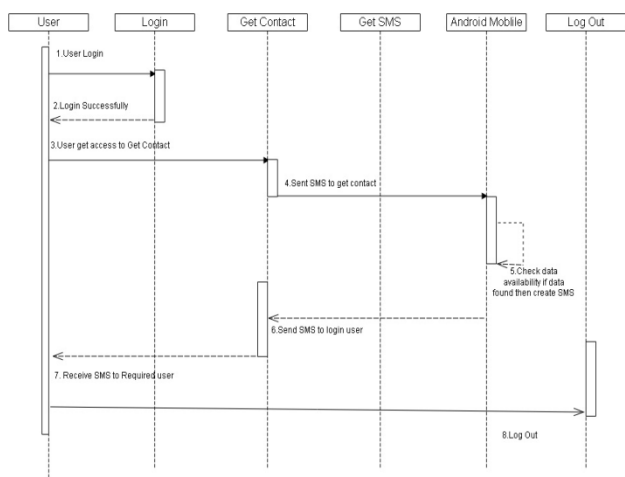


Figure no.4.2.5 : Sequence diagram

In figure no.4.2.5 Sequence diagram the flow is as below:

1. User login.
2. User login to take one name and password ,re enter password. By using these name and password user has successfully login.
3. User has get access to contact number in android mobile.
4. User sends to SMS for other android mobile. To get contact number.

5. Check the data availability if data found then create SMS.
6. Other side mobile application generates the SMS with the needed contact number and sends to requested mobile.
7. The Data SMS received by the requested mobile.
8. Requested mobile then Logout from Application. This is process of Sequence diagram of our project system.

4.2.6 Class Diagram:

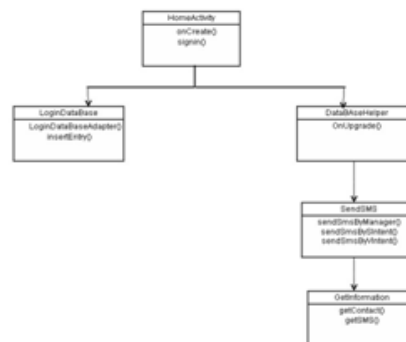


Figure no.4.2.6 : Class Diagram

This figure 4.2.6 is of class diagram of our project .In this figure shows the how the classes are flowed in system. Our project main class is Home Activity. LoginDatabase and DatabaseHelper classes are connected to the MainActivity class. Get SMS and Get Contact are method of Get Information class .This class is connected to the sentSMS class.

5. Algorithm:

1. Start
2. Application installation.
3. Registration of installed application to SMS receiver
4. Receiving the SMS allows application to set authorization and authentication.
5. When SMS is received it is register as per SMS receiver and it calls broadcast receiver which enables the application to receive intents that are broadcast by the system.

i)contact access:

The format as bellows

getcontact<coma> password<coma>contact name

ii)SMS access:

The format as bellows

getSMS<coma> password<coma>date

6. The application will wait for SMS arrival when it arrives

it will be register.

7. Every contact name that is saved in the phone will have unique ID and SMS is register with ID.
8. Based on id the contact number or SMS is Retrieved.
9. End.

6. Conclusion:

With the help of Android SDK, Eclipse IDE, JDK and SMS services, the Remote Data Access application is implemented. With this application, accessing the Android Smartphone is just a SMS away. This application is successfully completed with the various tests on emulator and on various handsets. This guarantees reduced human effort in the emergency situations with the simple and handy interface. It's a small effort from us to join our hands to make a user friendly and a handy tool to reduce the human effort in the strange situations.

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8. References:

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