Application to Access the Forgotten/Lost Offline Mobile (Axs)

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Abstract: *Mobile phones are used for an expansion of functions, including keeping in touch with own family participants, for conducting business, and which will have access to a smartphone in the event of an emergency. Some human beings carry a couple of cell phone for extraordinary purposes, such as for business and private use. This software is your personal offline assistant that will help you with the common issues faced in everyday life. It works completely without Internet. Using this application from another mobile we can get the contact information, locate the mobile, lock the screen of the lost mobile. I used Android Studio and java to develop this application. This application can be accessed only using a passcode set after installation and information can be accessed only if the passcode is correct. This application is compatible with any android mobile. User needs to grant access for location, contacts and override some system settings to work properly.*

Keywords : *Offline Assistant, Android Studio, Location, Contacts.*

I. INTRODUCTION

Losing a mobile phone is always considered as a disaster in one's life. Mobile phone acts as a database to store all the personal and valuable information. No one wishes to lose it and this application is a solution for such kind of problem. Applications like Google's Find my Device track the mobile only if it is online, if it is offline then it is tracked when it was last online [2]. But this android application AxS helps the user get the information about his mobile like location, getting the contacts, warn the thief using an alarm, change the mode from silent to normal. All the information exchange is done through messages.

This application can run in any basic mobile with a messages application and a GPS(Global Positioning System)[3]. The user need to send a message to lost mobile from another mobile which contains the passcode and the query.

The applications AxS which is present in lost mobile validates the passcode and if it is correct then the query is taken into consideration and the request is processed and a reply message is given. If the query provided is incorrect or else the passcode is incorrect then there will be no return message.

II. WORKING AND FEATURES

A specific format should be followed for this application to work and trace your phone properly.

i. Sender Message Format:

#passcode Query
Application considers the message that starts with a '#'.
To access the application in the mobile user need to set a passcode after installation and that passcode is validated upon the incoming message.[4]Query such as locate, alarm, etc., are prefixed that should be used while accessing the mobile
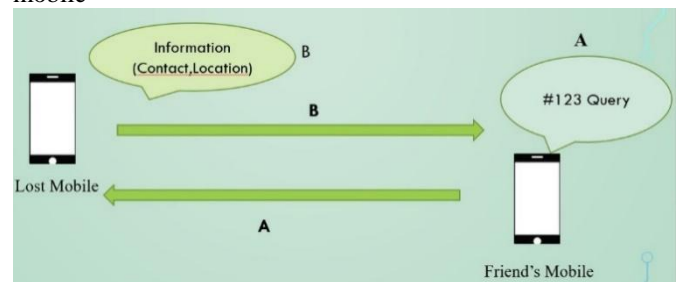

Fig: 3.1 Architecture

ii. Queries:

Some of the key queries are:
1. Locate: Gives the latitude and longitude of the mobile.
2. Alarm: Warns third person by giving an alarm.
3. Contact Name: Searches for the contact name and if it is found then the number is generated as a response and sent to the same number.
4. Ring: Changes the mode of mobile from silent to ring.

iii. Receiver Message Format:

1. Query is Locate: A link that gives the current location of mobile.
2. Query is Contact Name: Contact Number
3. Query is Alarm: No reply but an alarm starts on lost mobile.
4. Query is Ring: Application in mobile changes the mode from silent to ring.

iv. Flow of operations:

Step 1:

User should sign in after installation and application starts working.

Step 2:

Application filters all the incoming messages and considers all the messages that start with a '#'.

Step 3:

Validates the passcode that is set during the installation and stored in database.

Step 4:

Reads the query and searches whether it is defined or not. If defined then the respected requested is fulfilled and the response is sent through message. If the query is not defined then it is identified as an undefined one and no response is generated.
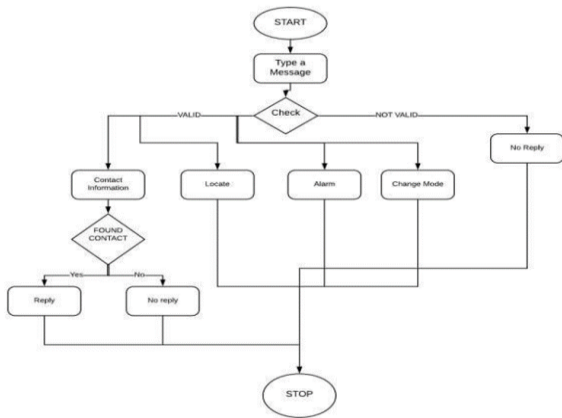
Flow of operations are illustrated in fig 3.2.[5]

Fig 3.2 Flow of operations.

III. RESULTS

As shown in fig3.3 After installation a sign up page appears where the data from the form is retrieved and stored in google cloud API[6][7]. During login, data is validated against the credentials provided during signup and if successful application setup is completed.
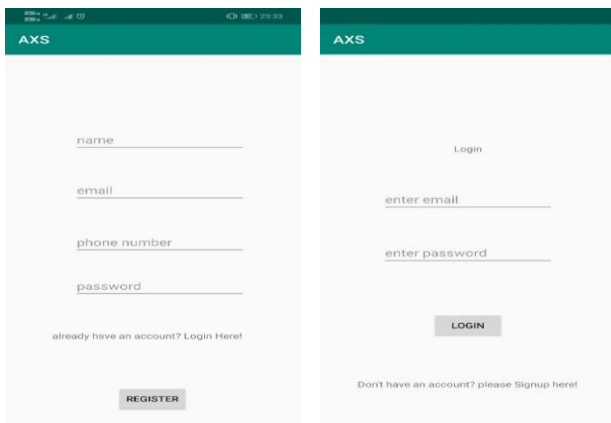

Fig 3.3 Signup and Login forms

Upon sending a message which starts with a # preceding with a correct passcode and a valid query a response is generated and is sent to same number.

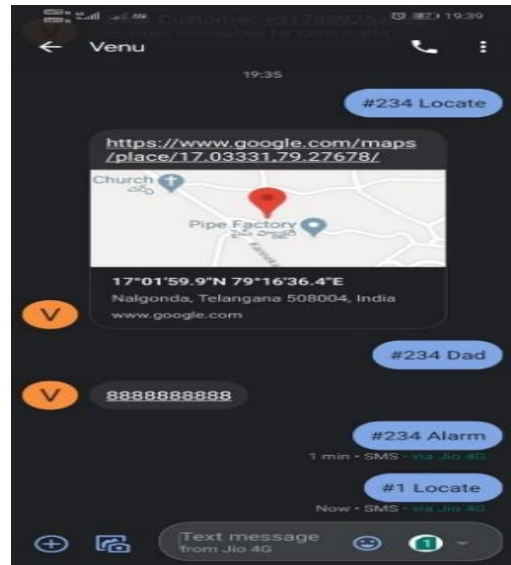If the passcode is wrong or else if the query is not a defined one then there is no response.[8]

Fig: 3.4 Results

As seen in Fig 3.4 various outputs are generated based on the query (Assume that the password set for the lost mobile(venu) is 234)

1. As shown in fig 3.4, message was sent starting with # and a correct password and the query is also a valid one. The reply was a link that can be opened using google maps.[9]
2. Second message was a contact name Dad and so the reply is generated with dad's contact number.
3. Third message was alarm that doesn't give any reply but and alarm is rung on lost mobile.
4. Fourth message was sent with wrong passcode. Upon filtering and identifying the message no response is generated because the password sent is wrong. [11]

IV. CONCLUSION

This AxS(Application to Access smart phone) application built for android mobile can help the user track the information of the lost offline mobile. Tracking includes getting the location, contact information, alarm. All the information can be accessed only if the passcode is same as the one which is set during installation of application. This application works purely offline and works with any mobile that supports the basic message application and has an inbuilt GPS in it[13]. A component is also built that overrides the system settings and if the intruder tries to switch off the mobile then the application requests the passcode to switch it off[12]. The only limitation is that is that if the sim card is removed from the mobile then the application wont work.

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