Data Retrieval Using SMS and GSM Technology

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Abstract— The application intends to retrieve data from mobile handset though it is not physically available with the user. The system is designed to controlled via SMS from anywhere that covered by GSM service. The system can also be programmed to send specific SMS to predetermined number if any event or condition triggered. If one's mobile phone is not available at the moment and he/she need to call a person urgently whose contact number is not available at that instant. To get that contact one has to go through very tedious process of calling home and get that contact number etc. The proposed system project helps to simplify this problem. One has to send an SMS to his/her own mobile with the contact name and automatically the contact will be returned to the same number.

Key words: SMS and GSM Technology, Data Retrieval

I. INTRODUCTION

People always want to be in control. They need real-time information whenever they need. With the advance of technology, mobile phone is no longer a luxuries item. It's easily available and posses by most population of our country. The popular communication technology used today is SMS, MMS, GPRS, and 3G. Among these, SMS is most widely use.

SMS is commonly used for the purpose of data retrieval & enquiry. Based on a query SMS, the result will be looked up from a database and returned to the sender via SMS. The project will discuss a solution to provide data recovery (in our case it is CONTACTS) from android based mobile devices from a remote location.

The project is based on Android operating system. The main reason for choosing this platform is it's free and open source nature. Also android is adopted by a very large community. Also android is not limited to phones now a days, it is also used in a DVR, handheld GPS, an MP3 player etc.

Most of the mobile users can't remember their all contacts as they have a facility to save them in the phone book of their phone. This can be taken as advantage as well as a disadvantage. When user doesn't have his/her phone with himself/herself, he/she doesn't have access to the contacts available in that phone. It may also be possible that user doesn't know where he/she left his/her mobile phone. In such scenario, user will waste valuable time in finding for mobile phone. If user forgets his/her mobile phone at unknown place, user may miss important phone calls or messages which can cause delay in work.

A. Existing Systems

The introduction of the Global System for Mobile Communication (GSM) and particularly the use of hand-held mobile phones brought the innovation of distance communication at remote location.

The existing system is the combination of hardware and software components both. But our proposed system works for the software components specifically it works with the data stored in our phone and that we require in our day-to-day life.

B. Proposed system

If you have forgotten your Cell Phone at home and you need to call a person urgently whose contact number is not available at that instant. In that case you have to call home and ask someone to search for that contact and then resend it back to you. It takes your lot of time. Instead of doing this tedious process one can send an SMS from someone's cell to his/her own mobile in a predefined syntax.
E.g.: GET CONTACT (Contact name/initial)
Also unread SMS can be retrieved using this application.
E.g.: GET SMS

1) Security Perspective

If one wants to get to know about this application, he/she can steal or can make an unauthorized access over the contacts. To secure the contacts from unauthorized access we can set a PIN number to be sent along with the syntax which will be known only to you. The application will match the PIN number, the syntax and then process and will reply back.
E.g.: 1234 GET CONTACT (contact name/initial)

C. Aim of application

The application allows you to search for phone numbers stored on your cell phone REMOTELY with the help of a simple Text message. This app is simple.

D. Problem definition

- User has to travel back to his home and access all missing information.
- User may call to his family member or friends in case user know the place of mobile phone and access those information.
- Alternate solution will be to develop a mobile application by which user can able to access all information from his mobile phone remotely.

1) Advantages

- Convenience
- Accessibility
- Portability
- Saves Times
- Cheaper
- Mobility

II. LITERATURE SURVEY

Previously all Smartphone manufacturers used to have dedicated software to control the remote control android phone using control of their phones from desktops. But especially with the Android smart phones, no particular

software is installed. There are plenty of custom third party applications available. But now with our system we can now remotely control your phone without internet. In previously for all software's you need for that is to have an Internet access. Not any application works without internet. So this type of software requires more cost. This is the biggest disadvantage of previous software's. In our application we remove the disadvantage of previous software. And we develop this application which works without internet. Or we can control our android phone remotely without internet. Without using any browser. The application require only messaging feature. And all android mobile has an inbuilt messaging feature. What you have to do is. You just want send particular command in particular format as provided in application by sending message on your remote device. Or remote mobile phone. Then the remote mobile work according to that command.

A. Chapter 3 System Analysis

1) Requirement Analysis

a) Software Requirements
- Minimum Android version 4.0
- Android Studio
- Android SDK version 19

b) Hardware Requirements
- RAM : 256 MB
- Android based smart phone

III. TECHNOLOGIES USED

A. Java

Java is a general purpose, high-level programming language developed by Sun Microsystems. A small team of engineers, known as the Green Team, initiated the language in 1991. Java was originally called OAK, and was designed for handheld devices and set-top boxes. Oak was unsuccessful, so in 1995 Sun changed the name to Java and modified the language to take advantage of the burgeoning World Wide Web.

B. Java Today

Today Java is a commonly used foundation for developing and delivering content on the Web. According to Oracle, there are more than 9 million Java developers worldwide and more than 3 billion mobile phones run Java.

C. An Object-Oriented Language

Java is an object-oriented language similar to C++, but simplified to eliminate language features that cause common programming errors. Java source code files (files with a .java extension) are compiled into a format called bytecode (files with a .class extension), which can then be executed by a Java interpreter. Compiled Java code can run on most computers because Java interpreters and runtime environments, known as Java Virtual Machines (VMs), exist for most operating systems, including UNIX, the Macintosh OS, and Windows. Bytecode can also be converted directly into machine language instructions by a just-in-time compiler (JIT). In 2007, most Java technologies were released under the GNU General Public License.

D. Java on the Web

Java is a general purpose programming language with a number of features that make the language well suited for use on the World Wide Web. Small Java applications are called Java applets and can be downloaded from a Web server and run on your computer by a Java-compatible Web browser.

Applications and websites using Java will not work unless Java is installed on your device. When you download Java, the software contains the Java Runtime Environment (JRE) which is needed to run in a Web browser. A component of the JRE, the Java Plug-in software allows Java applets to run inside various browsers.

E. Free Java Download

The official Java website provides links to freely download the latest version of Java. You can use the Java website to learn more about downloading Java, verify Java is installed on your computer, remove older versions, troubleshoot Java or or report an issue. After installing Java, you will need to restart your Web browser.

F. Eclipse

In computer programming, Eclipse is an integrated development environment (IDE). It contains a base workspace and an extensible plug-in system for customizing the environment. Eclipse is written mostly in Java and its primary use is for developing Java applications, but it may also be used to develop applications in other programming languages through the use of plugins, including: Ada, ABAP, C, C++, COBOL, Fortran, Haskell, JavaScript, Lasso, Lua, NATURAL, Perl, PHP, Prolog, Python, R, Ruby (including Ruby on Rails framework), Scala, Clojure, Groovy, Scheme, and Erlang. It can also be used to develop packages for the software Mathematica. Development environments include the Eclipse Java development tools (JDT) for Java and Scala, Eclipse CDT for C/C++ and Eclipse PDT for PHP, among others.

The initial codebase originated from IBM VisualAge. The Eclipse software development kit (SDK), which includes the Java development tools, is meant for Java developers. Users can extend its abilities by installing plug-ins written for the Eclipse Platform, such as development toolkits for other programming languages, and can write and contribute their own plug-in modules.

G. ADT

Android Developer Tools (ADT) is a plugin for Eclipse that provides a suite of tools that are integrated with the Eclipse IDE. It offers you access to many features that help you develop Android applications. ADT provides GUI access to many of the command line SDK tools as well as a UI design tool for rapid prototyping, designing, and building of your application's user interface.

IV. FEASIBILITY STUDY

The feasibility of the project is analyzed in this phase and business proposal is put forth with a very general plan for the project and some cost estimates. During system analysis the feasibility study of the proposed system is to be carried out. This is to ensure that the proposed system is not a burden to the company. For feasibility analysis, some

understanding of the major requirements for the system is essential.

Three key considerations involved in the feasibility analysis are

- Economical Feasibility
- Technical Feasibility
- Social Feasibility

A. *Economical Feasibility*

This study is carried out to check the economic impact but this system will have human efforts need for research and development (RND) it's very important part of our system. In company there is research team first do market research and taking decision but here we just check possibility and try to do our system best than others , no expenditures for our system and technologies we are going to use its totally freely available.

B. *Technical Feasibility*

This study is carried out to check the technical feasibility, that is, the technical requirements of the system. In our android application we are going to develop static application which is based on simple technique which is separation and phone database. all resources available in market but some limitation is there such as signal and battery issue.

C. *Social feasibility*

The aspect of study is to check the level of acceptance of the system by the user. This application is simple and very easy to use and works totally on SMS service. The proposed system Split Message is another cool feature. When searching for a name, the search may return many contact names and contact numbers which won't all fit into one reply message. its very easy and handy application so every person can easily use this application.

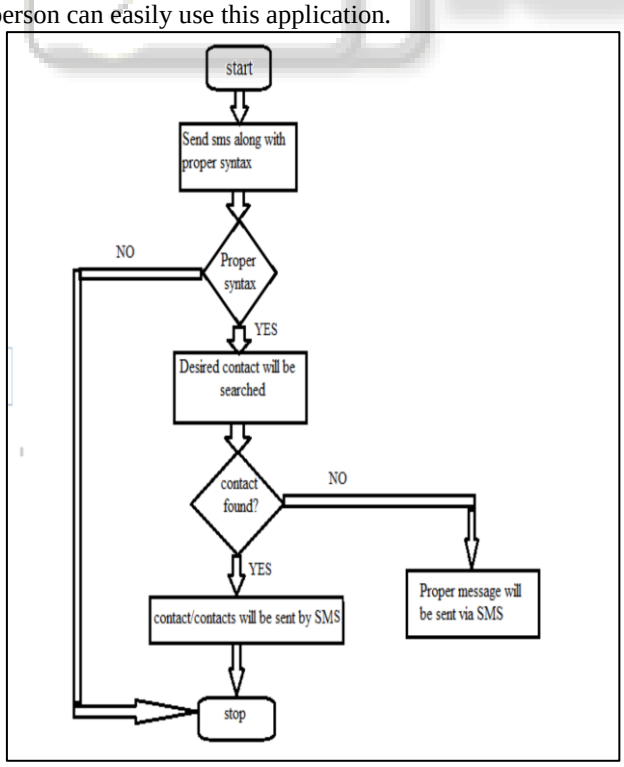

Fig. 5.1: Flowchart

V. System Architecture

A. *Algorithm*

Step 1: Input STRING S
Step 2: Divide S
Step 3: if (pin match) then
Enter system search ()
else
break
Step 4: search (name)
Step 5: if (phone data) == (name)
PUSH(s,n)
repeatStep 5 till cursor 0
Step 6: Send ()

VI. Conclusion

Thus the application is very small, simple and easy to use by using SMS service. The best part of the system is that it has a very low Memory Footprint i.e. it is very light on your phone's resources. The application overcomes the problem of 160 character length of a message. SMS based remote control for general purpose is beneficial for the human generation, because mobile is most recently used technology nowadays. The SMS based remote control for home appliances is easy to implement the system that ON/OFF the electrical device through remotely via SMS or it handled more and more electrical devices which are use in home. In simple automation system where the internet facilities and even PC are not provided, one can use mobile phone based control system which is simple and cost-effective. Alternatively for such requirements landline phone with extension card could also be select for the system. The application can be able to send other information such as email ID, address and other personal details via message using Multimedia service. One will not need to access internet to get the personal information.

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