Chatbot: An Android based Application

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Abstract: **MobileBot is an android based system helps to receive each and every generated call. The problem statement is that whenever any person make a call to someone, it is not necessary that the person at the receiving end would receive the call for sure. That particular person maybe engaged in some event. The event maybe any organizational meeting which that person is associated to, any examination which that particular person has to attend or any of such event. And suppose there is an emergency in such a situation for say, any theft situation, any medical emergency or any interview call and many more such event. So the problem statement is how to receive this calls when such situation occurs.**

Keywords: **Mobilebot, Chatbot, XAMPP, SDK, JDK**

1. Introduction

Nowadays mobile devices have become a way a life for everyone. With the continuous growth of mobile devices in its popularity and functionality the demand for advanced mobile applications in people's daily lives is continuously increasing. MobileBot is an android based system helps to receive each and every generated call. The problem statement is that whenever any person make a call to someone, it is not necessary that the person at the receiving end would receive the call for sure. That particular person maybe engaged in some event. The event maybe any organizational meeting which that person is associated to, any examination which that particular person has to attend or any of such event. And suppose there is an emergency in such a situation for say, any theft situation, any medical emergency or any interview call and many more such event. So the problem statement is how to receive this calls when such situation occurs.

The SDK includes a comprehensive set of development tools, including a debugger, software libraries, a handset emulator based on QEMU, documentation, sample

In present day scenario we see that whenever any person makes a call to someone, it is not necessary that, the person at the receiving end would receive the call. Maybe the person is attending any important meeting or attending any examination or for any genuine reason. Here in such scenario suppose if the call is very important, for say, maybe a medical emergency or theft alert, then it is somewhat important to make that phone call receive. By this some preventive measures can be taken instantly. So the problem statement is to receive each and every generated call. In this proposed system whenever any caller generates any call to someone again it is not necessary that it will be received, so in this case this system once the call is

missed an automatic message will be generated from cal lees end that, currently the person is busy so reply 1,. Now 1 are level of severity of call i.e. how important the call is. 1 being the highest, under this any medical emergency or theft alert like situation or emergency situation.

Once the caller replies any one of this and once it is received to the callee, the person sat the receiving ends phone will start ringing. Now again if the phone is in the silent mode this system will convert the phone from silent to general mode and make the phone ring. So just in case if a person is attending any conference or meeting or any event, the person's phone will start alerting the user. In present day scenario whenever someone makes a call to someone it is not necessary that the the person at the receiving end will receive the call. This system brings an idea to receive each and every generated call. In present day scenario it is not necessary that the person at the receiving end will receive the call at very first attempt, which may lead some serious cause. So based on severity of the call here, the caller will reply, this reply will be compared with few parameters and once this fulfills the condition, based on severity the phone of the call will ring. Now that Android is an open platform whose sources can be observed by anyone. Android is a software stack for mobile devices that includes an operating system, middleware and key.

2. Literature review

A. Location tracking using SMS Based Android Mobile

Android platform is a new generation of smart mobile phone platform launched by Google. Android provides the support of location service. So far, the development of location applications is complex and difficult. This paper introduces the architecture and component models of Android, and analyzes the anatomy of an Android application including the functions of Activity, Intent Receiver, Service, SMS, and etc. Based on Android, the design method of a location-based mobile service is then presented. This example shows that it's so easy to implement location application which fetches latitude and longitudinal values and sends through the desired phone number.

B. E-Voting System Using Android Smartphone

Each voter can vote by sending an SMS using any kind of mobile connection line or any kind of mobile hand set to the system an android application is created in Android phone, then the system will start implementing some processes on that SMS

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which is sent by the voters into the server through a network. A database is installed on the server side to send a result back to the voter by the android system application. The voter can use internet connection through a website which is developed throughout this work.

C. Secure SMS Communication in Android based System with Two Stage Protection

The Android platform has been dealt as a topic of mobile security because Android is an open platform whose sources can be observed by anyone. In order to protect the SMS on the platform, the designed scheme provide confidentiality of a SMS and the integrity. In this paper, they presented Common Private Key Cryptography for SMS security choosing the key from a table randomly. They have also used simple hashing technique to keep the integrity of the message intact.

3. Proposed System

Proposed system is in such a way that once a caller tries to call a person and for reason if the person at the receiving end not able to receive the call or is not available to receive the call, maybe attending any event like attending any examination or attending any conference meeting or for any such reason, an automatic message from the person at receiving ends phone will generate a message back to the caller's phone which will say that," currently busy. Reply 1 based on severity of the problem". This 1 are again the level of severity of any incident which has occurred and which the caller is trying to convey it to the person which the caller is trying to message. This1 may include several hazardous and non-hazardous event like medical emergency or theft situation, which the caller wants to convey to.

4. Methodology

A. Android Operating System

Mobile Bot is an android based system which uses classes of java and android. Android is an open source and Linux-based Operating System for mobile devices such as smartphones and tablet computers. Android was developed by the Open Handset Alliance, led by Google, and other companies. Android offers a unified approach to application development for mobile devices which means developers need only develop for Android, and their applications should be able to run on different devices powered by Android. The first beta version of the Android Software Development Kit (SDK) was released by Google in 2007 where as the first commercial version, Android 1.0, was released in September 2008.On June 27, 2012, at the Google I/O conference, Google announced the next Android version, 4.1 Jelly Bean. Jelly Bean is an incremental update, with the primary aim of improving the user interface, both in terms of functionality and performance. The source code for Android is available under free and open source software licenses. Google publishes most of the code under the Apache License version 2.0 and the rest, Linux kernel changes, under the GNU General Public License version 2. Android is a powerful operating system competing with Apple 4GS and supports great features.

Few of them are listed below – Beautiful UI Android OS basic screen provides a beautiful and intuitive user interface, Connectivity GSM/EDGE, IDEN, CDMA, EV-DO, UMTS, Bluetooth, Wi-Fi, LTE, NFC and WiMAX, Storage SQLite, a lightweight relational database, is used for data storage purposes. Media support H.263, H.264, MPEG-4 SP, AMR, AMR-WB, AAC, HE-AAC, AAC 5.1, MP3, MIDI, Ogg Vorbis, WAV, JPEG, PNG, GIF, and BMP. Messaging SMS and MMS. Web browser Based on the open-source WebKit layout engine, coupled with Chrome's V8 JavaScript engine supporting HTML5 and CSS3. Multi-touch Android has native support for multi-touch which was initially made available in handsets such as the HTC Hero. Multi-Language Supports single direction and bi-directional text.

Android Applications Android applications are usually developed in the Java language using the Android Software Development Kit. Once developed, Android applications can be packaged easily and sold out either through a store such as Google Play, SlideME, Opera Mobile Store, Mobango, F-droid and the Amazon Appstore. Android powers hundreds of millions of mobile devices in more than 190 countries around the world. It's the largest installed base of any mobile platform and growing fast. Every day more than 1 million new Android devices are activated worldwide. This tutorial has been written with an aim to teach you how to develop and package Android application. We will start from environment setup for Android application programming and then drill down to look into various aspects of Android applications.

B. Theoretical Background

Android Inc. was founded in Palo Alto, California, in October 2003 by Andy Rubin, Rich Miner, Nick Sears, and Chris White. Rubin described the Android project as "tremendous potential in developing smarter mobile devices that are more aware of its owner's location and preferences". The early intentions of the company were to develop an advanced operating system for digital cameras, and this was the basis of its pitch to investors in April 2004. The company then decided that the market for cameras was not large enough for its goals, and by five months later it had diverted its efforts and was pitching Android as a handset operating system that would rival Symbian and Microsoft Windows Mobile. In July 2005, Google acquired Android Inc. for at least $50 million. Its key employees, including Rubin, Miner and White, joined Google as part of the acquisition. On November 5, 2007, the Open Handset Alliance, a consortium of technology companies including Google, device manufacturers such as HTC, Motorola and Samsung, wireless carriers such as Sprint and T-Mobile, and chipset makers such as Qualcomm and Texas Instruments, unveiled itself, with a goal to develop "the first truly open and comprehensive platform for mobile devices". Within a year, the Open Handset Alliance faced two other open source competitors, the Symbian Foundation and the LiMo Foundation, the latter also developing a Linux-based mobile operating system like Google. In September 2007, InformationWeek covered an E value serve study reporting that

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Google had filed several patent applications in the area of mobile telephony.

Since 2008, Android has seen numerous updates which have incrementally improved the operating system, adding new features and fixing bugsin previous releases. Each major release is named in alphabetical order after a dessert or sugary treat, with the first few Android versions being called "Cupcake", "Donut", "Eclair", and "Froyo", in that order. During its announcement of Android KitKat in 2013, Google explained that "Since these devices make our lives so sweet, each Android version is named after a dessert", although a Google spokesperson told CNN in an interview that "It's kind of like an internal team thing, and we prefer to be a little bit — how should I say — a bit inscrutable in the matter, I'll say".

In 2010, Google launched its Nexus series of devices, a lineup in which Google partnered with different device manufacturers to produce new devices and introduce new Android versions. The series was described as having "played a pivotal role in Android's history by introducing new software iterations and hardware standards across the board", and became known for its "bloat-free" software with "timely ... updates". At its developer conference in May 2013, Google announced a special version of the Samsung Galaxy S4, where, instead of using Samsung's own Android customization, the phone ran "stock Android" and was promised to receive new system updates fast. The device would become the start of the Google Play edition program, and was followed by other devices, including the HTC One Google Play edition, and Moto G Google Play edition. In 2015, Ars Technica wrote that "Earlier this week, the last of the Google Play edition Android phones in Google's online storefront were listed as "no longer available for sale" and that "Now they're all gone, and it looks a whole lot like the program has wrapped up".

Eric Schmidt, Andy Rubin and Hugo Barra at a 2012 press conference announcing Google's Nexus 7 tablet From 2008 to 2013, Hugo Barra served as product spokesperson, representing Android at press conferences and Google I/O, Google's annual developer-focused conference. He left Google in August 2013 to join Chinese phone maker Xiaomi. Less than six months earlier, Google's then-CEO Larry Page announced in a blog post that Andy Rubin had moved from the Android division to take on new projects at Google, and that Sundar Pichai would become the new Android lead. Pichai himself would eventually switch positions, becoming the new CEO of Google in August 2015 following the companies restructure into the Alphabet conglomerate, making Hiroshi Lockheimer the new head of Android.

In June 2014, Google announced Android One, a set of "hardware reference models" that would "allow [device makers] to easily create high-quality phones at low costs", designed for consumers in developing countries. In September, Google announced the first set of Android One phones for release in India. However, Recode reported in June 2015 that the project was "a disappointment", citing "reluctant consumers and manufacturing partners" and "misfires from the search company that has never quite cracked hardware". Plans to relaunch Android One surfaced in August 2015, with Africa announced as the next location for the program a week later. A report from The Information in January 2017 stated that Google is expanding its low-cost Android One program into the United States, although The Verge notes that the company will presumably not produce the actual devices itself.

Google introduced the Pixel and Pixel XL smartphones in October 2016, marketed as being the first phones made by Google, and exclusively featured certain software features, such as the Google Assistant, before wider rollout. The Pixel phones replaced the Nexus series, with a new generation of Pixel phones launched in October 2017.

C. Mobile Bot

1) Description

Mobile Bot is an android based system helps to receive each and every generated call. The problem statement is that whenever any person make a call to someone, it is not necessary that the person at the receiving end would receive the call for sure. That particular person maybe engaged in some event. The event maybe any organizational meeting which that person is associated to, any examination which that particular person has to attend or any of such event. And suppose there is an emergency in such a situation for say, any theft situation, any medical emergency or any interview call and many more such event. So the problem statement is how to receive this calls when such situation occurs. MobileBot is an android based system which uses a number of android services, in order to receive such type of calls. By this some preventive measures can be taken instantly. So the problem statement is to receive each and every generated call. In this proposed system whenever any caller generates any call to someone again it is not necessary that it will be received, so in this case this system once the call is missed an automatic message will be generated from callees end that, currently the person is busy so reply 1. Now 1 are level of severity of call i.e. how important the call is. 1 being the highest, under this any medical emergency or theft alert like situation or emergency situation. On Once the caller replies any one of this and once it is received to the callee, the person at the receiving ends phone will start ringing. Now again if the phone is in the silent mode this system will convert the phone from silent to general mode and make the phone ring. So just in case if a person is attending any conference or meeting or any event, the person's phone will start alerting the user. In present day scenario whenever someone makes a call to someone it is not necessary that the person at the receiving end will receive the call. This system brings an idea to receive each and every generated call. Now here are few classes and their methods which are included in this Mobile Bot application.

2) SMS Manager

In Android, you can use SmsManager API or devices Built-in SMS application to send SMS's. In this tutorial, we shows you two basic examples to send SMS message,

Sms Manager API:
Sms Manager sms Manager = SmsManager.getDefault();
Sms Manager. Send Text Message("phone No", null, "sms message", null, null);

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3) Broadcast Receiver

Broadcast Receivers simply respond to broadcast messages from other applications or from the system itself. These messages are sometime called events or intents. For example, applications can also initiate broadcasts to let other applications know that some data has been downloaded to the device and is available for them to use, so this is broadcast receiver who will intercept this communication and will initiate appropriate action.

4) Telephony Manager

Android provides Built-in applications for phone calls, in some occasions we may need to make a phone call through our application. This could easily be done by using implicit Intent with appropriate actions. Also, we can use Phone State Listener and Telephony Manager classes, in order to monitor the changes in some telephony states on the device.

5) Sqlite database

SQLite is an open source SQL database that stores data to a text file on a device. Android comes in with built in SQLite database implementation.

SQLite supports all the relational database features. In order to access this database, you don't need to establish any kind of connections for it like JDBC, ODBC etc.

6) Media Player

Android provides many ways to control playback of audio/video files and streams. One of this way is through a class called Media Player. In our system we have used it for ringtone purpose.

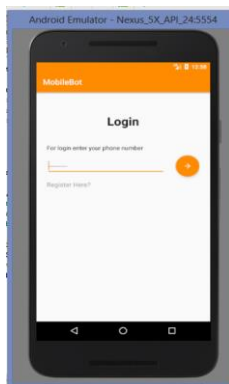

Fig. 1. Mobile bot

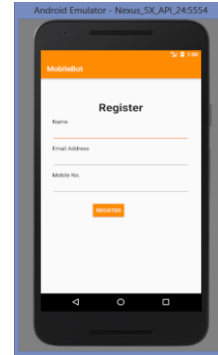## 5. Design and implementation

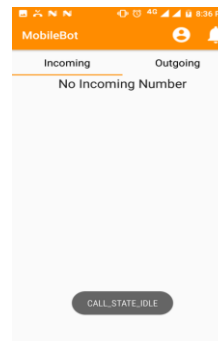Fig. 2. Login

Fig. 3. Register
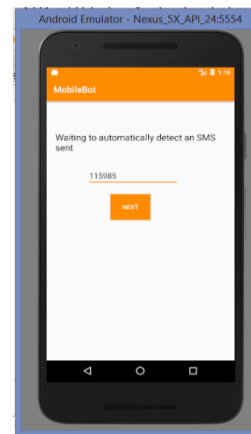

Fig. 4. No incoming number
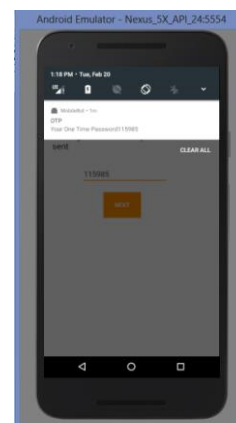

Fig. 5. Waiting to automatically detect sms

Fig. 6. OTP received and detected
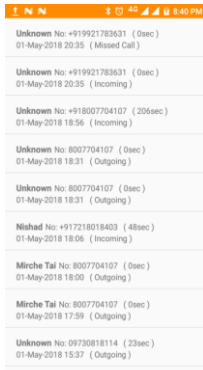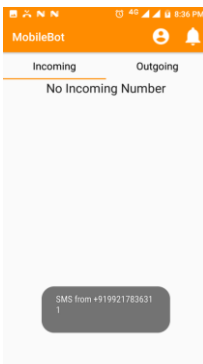
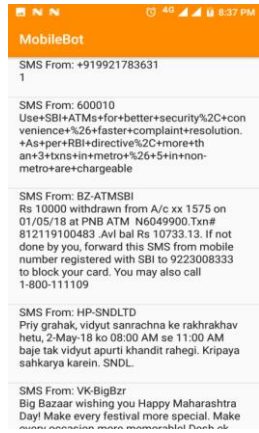Fig. 7. Call status

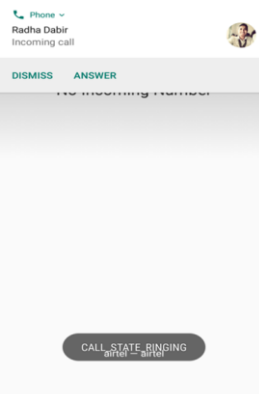Fig. 8. No incoming number

Fig. 9. SMS received

Fig. 10. Call state ringing

Users interact with the app on a variety of levels, from pressing a Submit button to downloading information onto their device. Accordingly, we should test a variety of use cases and interactions as we iteratively develop the app.

6. Conclusion

This paper presented implementation of chatbot android based application.

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