

# **INTERNSHIP ON ANDROID APPLICATION DEVELOPMENT**

**BY**

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This Report Presented in Partial Fulfillment of the Requirements for the  
Degree of Bachelor of Science in Computer Science and Engineering

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**DAFFODIL INTERNATIONAL UNIVERSITY**

**DHAKA, BANGLADESH**

**September 2019**

## **APPROVAL**

This Project/internship titled Internship on Android Application Development, submitted by Md. Abu Rayhan Khandaker, ID No: 162-15-8065 to the Department of Computer Science and Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 12-09-2019.

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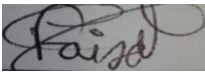
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## DECLARATION

I hereby declare that, this internship report is prepared by me Md. Abu Rayhan Khandaker, Id: 162-15-8065 to the department of Computer Science and Engineering at Daffodil International University, under my honorable Supervised by **Fahad Faisal, Assistant Professor, Department of CSE**, Daffodil International University. I also declare that, I collect information from my internship organization Sonali Bank limited.

**Supervised by:**



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I am really grateful and wish our profound our indebtedness to **Fahad Faisal, Assistant Professor**, Department of CSE Daffodil International University, Dhaka. Deep Knowledge & keen interest of my supervisor in the field of “Mobile Application Development” to carry out this project. His endless patience , scholarly guidance, continual encouragement, constant and energetic supervision, constructive criticism, valuable advice, reading many inferior draft and correcting them at all stage have made it possible to complete this project.

I would like to express our heartiest gratitude to **Dr. Syed Akhter Hossain, Professor and Head**, Department of CSE, for his kind help to finish my project and also to other faculty member and the staff of CSE department of Daffodil International University.

I would like to thank our entire course mate in Daffodil International University, who took part in this discuss while completing the course work.

Finally, I must acknowledge with due respect the constant support and patients of my parents.

## **ABSTRACT**

Android is a software stack for mobile devices that includes an operating system, middleware and key applications. Android is a software platform and operating system for mobile devices based on the Linux operating system.

And developed by Google and the Open Handset Alliance. It allows developers to write managed code in a Java-like language that utilizes Google-developed Java libraries, but does not support programs developed in native code.

The revealing of the Android stage on 5 November 2007 was announced with the establishing of the Open Handset Alliance, a consortium of hardware, software and telecom organizations committed to propelling open models for mobile devices.

At the point when discharged in 2008, a large portion of the Android stage will be made available under the Apache free-software and open-source license.

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# **CHAPTER 1**

## **Introduction**

### **1.1 Introduction**

Android is a Mobile Operating System it is modified Linux based and other open source software. That is planning contact screen all phone, it is built up developed Inc., Google bought 2005, android lunched in September 2008. Android current stable version android 9 “pie” released august 2018. Android developed android TV for television and Auto Cars, Android also developed digital camera, A Standout Generalized OS android. Android associated with Software developed in the google.it is also called Google Mobile Service (GSM). That is frequently installed on the device. Google play service associated developed platform. Android phone others facility on the platform. It is commonly use OS version. It is also use web browser. Android is the best OS worldwide on smartphones since 2011 and tablets since 2013. may 2017. two billion monthly active users Google play store features over 2.6 million apps.

### **1.2 Motivation**

I am at present looking for after the last semester of my Bachelor Degree program in CSE. Linux has expand at a high rate over past year with recently expansion even within government organization looked as superior by my accomplishments, ambition, I am perfectly skilled details of android based system during the internship. I pick my entrance level position at Sonali Bank Limited since I found that the Sonali Bank Limited has vanquished every client satisfaction and organizations because of their stunning reputation. Sonali Bank Limited is by and by a remarkable and assumed government bank in Bangladesh. I trust that I can viably show my experience by the help of Sonali Bank Limited.

### **1.3 Internship Objectives**

Internship program has 06 credit offer final year student of daffodil international university this is working time practical life. More people use smart phones, the need high quality android developers becomes more vital than ever. People in this profession are responsible for developing apps on phones so that that device. since many employee focus on the objective statement more than any other part of the resume. Android Developers turns out to be more imperative than any other time in recent memory. Individuals in this calling are in charge of creating applications on telephones with the goal that the gadget has expanded usefulness. Since numerous businesses center around the target explanation more than some other piece of the resume, you should make a point to underscore your capabilities and achievements in this area.

### **1.4 Introduction to the Company**

Sonali bank limited is the commercial bank in Bangladesh bank largest bank of the country. Sonali bank Limited set up 1972 under the Bangladesh Bank. Sonali Bank has an aggregate of 1215 branches. What's more, 2 are found India. Also working exchange in (UK) United Kingdom, it is earned of the money debts and profit foreign country company employer is hardly working to the office time. Bangladesh government earned profit of the sonali bank limited. Bangladesh market place Sonali bank limited debts the people something to money to encourage outside trade of the settlements. keeps on being a piece of the transformation that is associating a huge number of Bangladeshi individuals and around on the planet. was set up this keeping a particular job in the brain.

## **1.5 Report Layout**

### **Chapter (1)**

I have described the Introduction, Motivation, Internship Objective, Introduction to the Company and Report layout

### **Chapter (2)**

I have described the about introduction to Sonali Bank Limited, Product and Market Situation, Target Group, SWOT Analysis and Organizational Structure

### **Chapter (3)**

I have described about Daily Task and Activities, Event and Activities, Project Task and Activities and Challenges.

### **Chapter (4)**

I have described is Competencies Earned, Smart Plan and Reflection

### **Chapter (5)**

I have described Discussion and Conclusion and Scope for Further Career

## **CHAPTER 2**

### **Organization**

#### **2.1 Introduction**

Sonali bank limited is establishing of 1972 under of the Bangladesh bank. Sonali bank nationazation of branch of East Pakistan 1971 liberation war. Bangladesh freedom has name of Sonali bank limited. The bank had been discharging its nation-building responsibilities by undertaking government entrusted different socio-economy schemes as well as money market activities volition, covering all spheres of the economy. of its own The working the benefit of government responsibility Sonali bank limited. The bank has been converted to a public limited company with 100% ownership of the government and started functioning as Sonali bank limited November 15, 2007 taking over all assestes, liabilities and business of Sonali bank. After corporatization, the management of the bank has been given required autonomy to make the bank competitive and run its business effectively. Control over of benefit and practice of government business and corporations and administration has been expected. bank is financial association scenery of monetary progression segment change money related exceedingly fruitful nearby, unrivaled standpoint items, the supports are rumored character in the field of exchange and business and their stake strange from delivery to material and fund to vitality and so on completely on Sonali bank limited an exceptionally expert with long in banking continuously bank situation change experience simply economic situation and every new thinking about economic growth of the people. Bank is professionally working hardly situation of policy.

## 2.2 Product and Market Situation

Sonali bank limited is a largest of commercial bank of Bangladesh. Most arranged relationship of business depth of urgent business morals in Clients Socially of the committed driving money related establishment with overall close ness.

The primary object of the report to think about the advertising strategies Bank Limited. This Bank attempts to give higher quality administrations which prompts higher consumer loyalty. The report gathered of auxiliary books source like of the Sonali Bank Limited. It incorporate wellspring of existing distributed information, example of manual official site banking diaries. Research and record articulation.

From information examination, I found that client have picked sonali bank for altruism and policy of security, advance framework as will. Its most fulfilled administration is giving credits to the clients.

Sonali Bank Limited should give more on more exertion to make well build up market place or Bangladesh. Sonali Bank Limited ought to be increasingly adaptable to dispense credit and advance. The bank ought to be expanded money counter. Sonali Bank Limited give advance in various division.

- The borrowing, raising or taking up of money
- The lending or advancing of money either upon or without security
- The granting and issuing of letters of credit, traveler's checks, and circular notes
- The buying, selling and dealing in gold and silver coins and coins of other metals
- The buying and selling of foreign exchange including foreign bank notes
- The acquiring, holding, issuing on commission, underwriting and dealing in stocks

### **2.3 Target Group**

To show great business citizenship, firms can report as per various CSR revealing rules or guidelines, including:

Target group of the world is business and sequential potentially management of working system client want international global certification standard ISO 14000. Specialized direction on eco-proficiency markers, corporate obligation revealing and corporate administration exposure.

A few countries require CSR announcing; however concurrence on important estimations of social and natural execution is troublesome. Numerous organizations presently produce remotely reviewed yearly issues ("Triple Bottom Line of Reports"), yet the reports shift generally to arrangement, assessment strategy (even of inside a similar company). Faultfinders reject there are reports as lip administration, referring to models, for example, "Corporate Responsibility Annual Report" that is tobacco enterprises' of social reports.

### **2.4 SWOT Analysis**

SWOT Analysis of android is the commonly uses market place and line keeping and temporary system.

- Strengths: Google being a leader technology developed the android mobile application can be integrated with Gmail access
- Weakness: Multimedia support for android mobiles is less unlike which centralized call of iTunes has. Android always external treats like malware as it is developer friendly and source code.
- Opportunities: many network support in android and reasons heavy boost up in their sales.
- Threats: android threads a though apples ios act making ios complitible to other device will result in decline of android market share

## 2.5 Organizational Structure

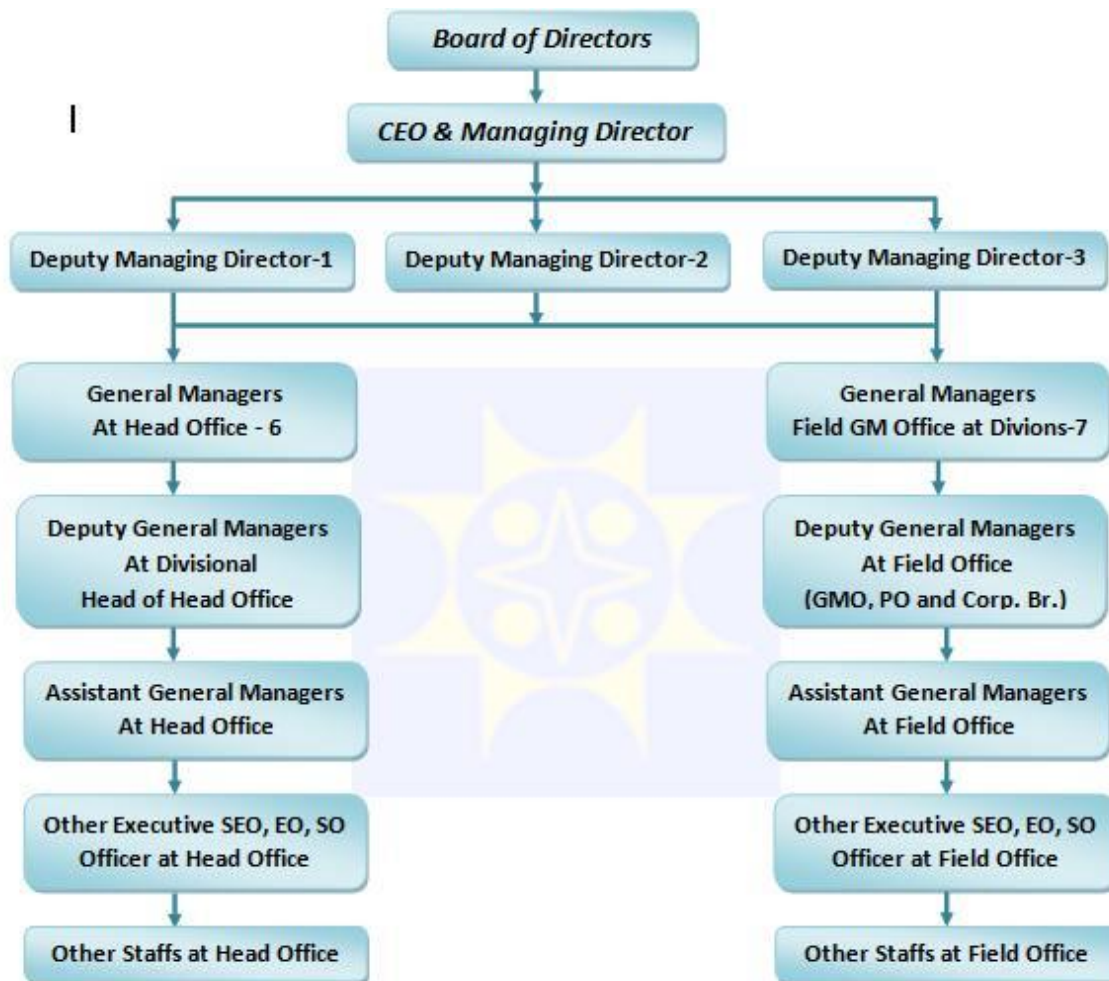


Figure 2.5.1: Organizational structure

Somali bank limited of as a Directors of Chairman and Managing Director and Govt. Then One Board Secretary performs task as a representative of the Board of Directors. General Manager is two categories Head Office and Field GM office .There are General Managers are responsible for different Departments. All GM directly report to MD. Every GM is supported by Deputy General Manager, Manager, Deputy Manager and Assistant Managers. Others Executive report SEO,EO,SO report the Assistant Manager. Other staff of head office report the Other Executive The diagram shown above is up to manager level of each department.

## CHAPTER 3

### Tasks, Projects and Activities

#### 3.1 Daily Task and Activities

I am completing my intern from Sonali Bank Limited (SBL) in Android Application Development. under their Software Department. they treated me as like their employee. Sbl maintain their works and activities with every day 10.00-5.00 without government holy day. I have started my internship from 2 April 2019 and going on.

In internship period I had to do this type of works which assigned by the authority.

- Introduction of Android
- Send Sms in android
- Android Layout
- Xml
- List View
- Fragmentation
- Adapter View
- Splash Screen
- Interface

#### 3.2 Events and Activities

By all of this easily, I may complete my internship works. The work environment focused the understanding of the present technical organization it is easily concept my project usually the send SMS android and the activities system.

Planning the basic for transitory position of primary stage, when understanding the process issue has been in the midst of passage level position, by then it is required to offer getting ready to permanent the issue. Issue has been identified and planning to the project handling it.



## **Introduction of Android**

Android is a fast application improvement for local Android applications, created and any other software limited. B4A is an option in contrast to programming with Java. Android is use ABD manager and emulator program run time. Before the runtime debugging the program. Android ink was founded in Palo Alto of California, U.S by Andy Rubin rich miner nick and Charis white in 2003.it is uses can be camera, music player, tablet PC, T.V, Web browser etc. The language itself is like Visual Basic and Visual Basic .Net however it is adjusted to the local Android environment.[3] B4A is an article based and occasion driven language.B4A produces standard marked Android applications which can be transferred to application stores like Google Play, Samsung Apps and Amazon Appst .

## **Android Layout**

A Layout deals with the plan of contraptions, (for instance, Text, Buttons, and Edit Text) as we find in the application management. All the android layout manifest file, xml file, app file resource and java programming and design the xml file internet connected the manifest file and uses the layout.

### **Layouts two commonly uses**

- Linear Layout and
- Relative Layout

### **There is some more layout use**

- List View Layout
- Grid View Layout
- Frame Layout
- Web View Layout

## Linear Layout

Linear layout is a view group all children in single line vertical and horizontal.

## Relative Layout

Relative Layout is a layout is view group display child views in relative position. The position can be specified as relative to sibling elements such as (Left or below another view)

## List View

A list view all list number show the list serial maintain the view group

Shown in fig below.



Figure 3.2.1 List View

## Grid View

A Grid View Layout is a Grid place vertical and horizontal line all use grid group  
Grid manner as shown in figure below.

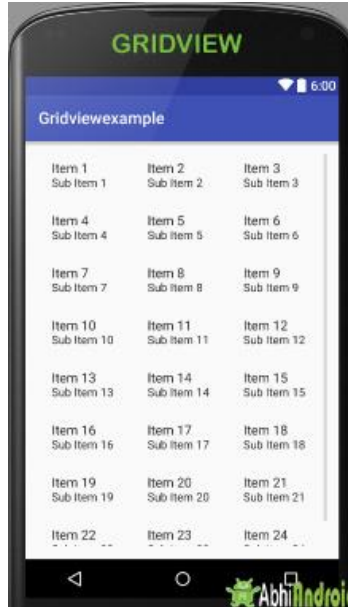


Figure 3.2.2 : Grid View Layout

## Frame Layout

Frame layout is design screen and block out a single item. Generally, Frame Layout should be child use.



Figure 3.2.3 : Frame Layout

## Web View Layout

Web view layout is a content of the online system programming into the any link the system use by Google online Server.

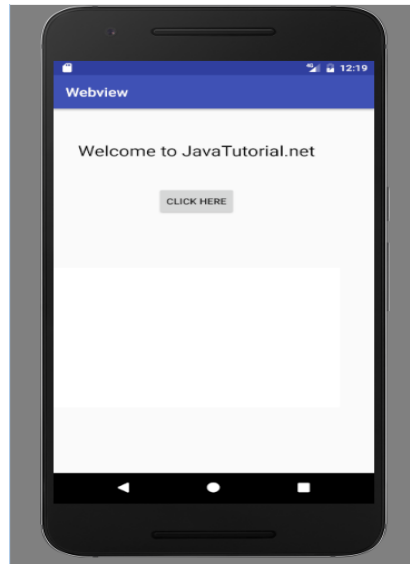


Figure 3.2.4 : Web View Layout

## Android Splash screen

Usually the android splash screen which is open on the phone then splash screen use. it is a basic consistent screen for a fixed any other time which is use different company name and logo chart, publicizing content so on.

## Fragmentation

The danger or worry that an expansion of veering variations of the Android stage will bring about the failure of certain gadgets to appropriately run applications composed with the Android SDK. With an enormous number of custom renditions of the Android stage developing, the worry is that interoperability will be debilitated because of the potential for applications fabricated explicitly for one variation or gadget not having the option to work with others. Google has made an Android similarity program to help subdue fears of Android discontinuity and has additionally regarded the possibility of Android fracture a

"bogeyman" in an ongoing website, however worries about gadget explicit applications prompting interoperability issues continue in any case.

### **Adapter View**

Adapter View is a View Group that showcases things stacked into a connector. The most widely recognized sort of connector originates from a cluster based information source.

### **Interface & Navigation**

User interface consisting of the set in dials, knobs operating system command and device provide program to allow the user to communicate and user computer program. A gui is usually more satisfying and friendly a computer system.

Navigation is field study that focused one the progress of monitoring and controlling movement the craft of vehicles navigation others categories aeronautic navigation, marin navigation and space navigation. Navigation is specialized knowledge perform compared and location and partner.

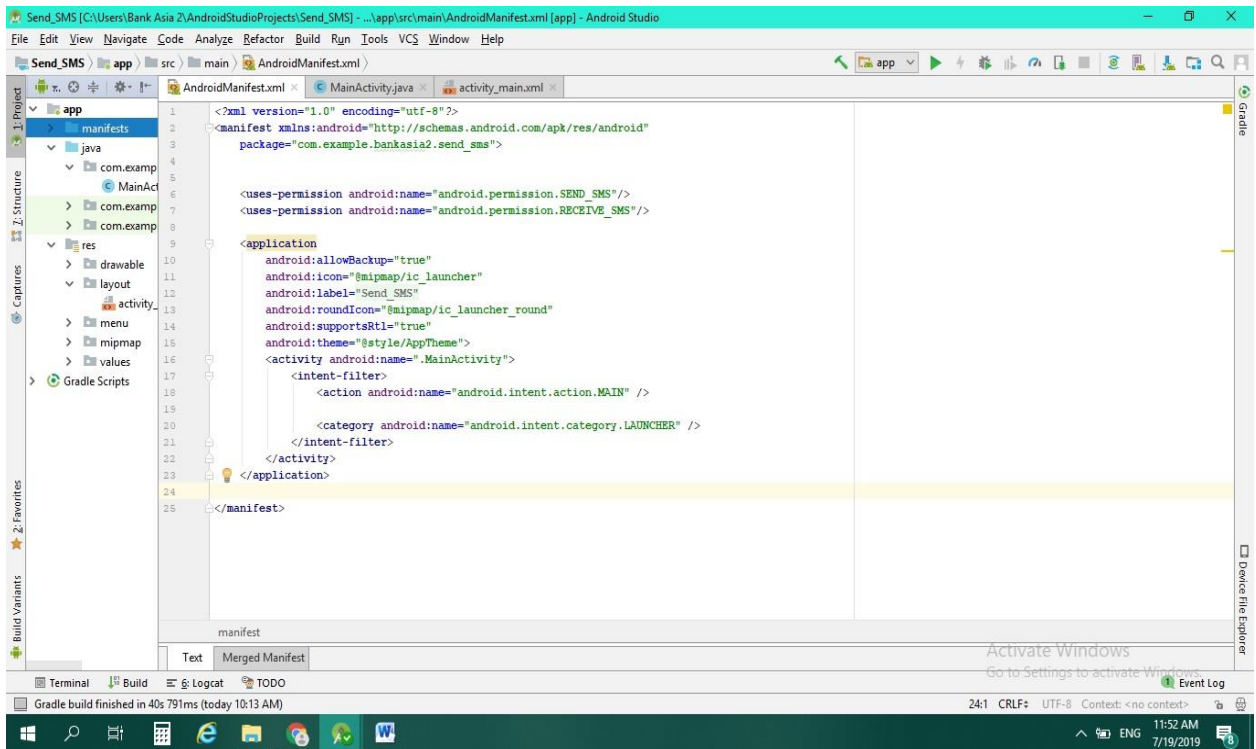


Figure 3.2.5: Send Sms in android of manifests file

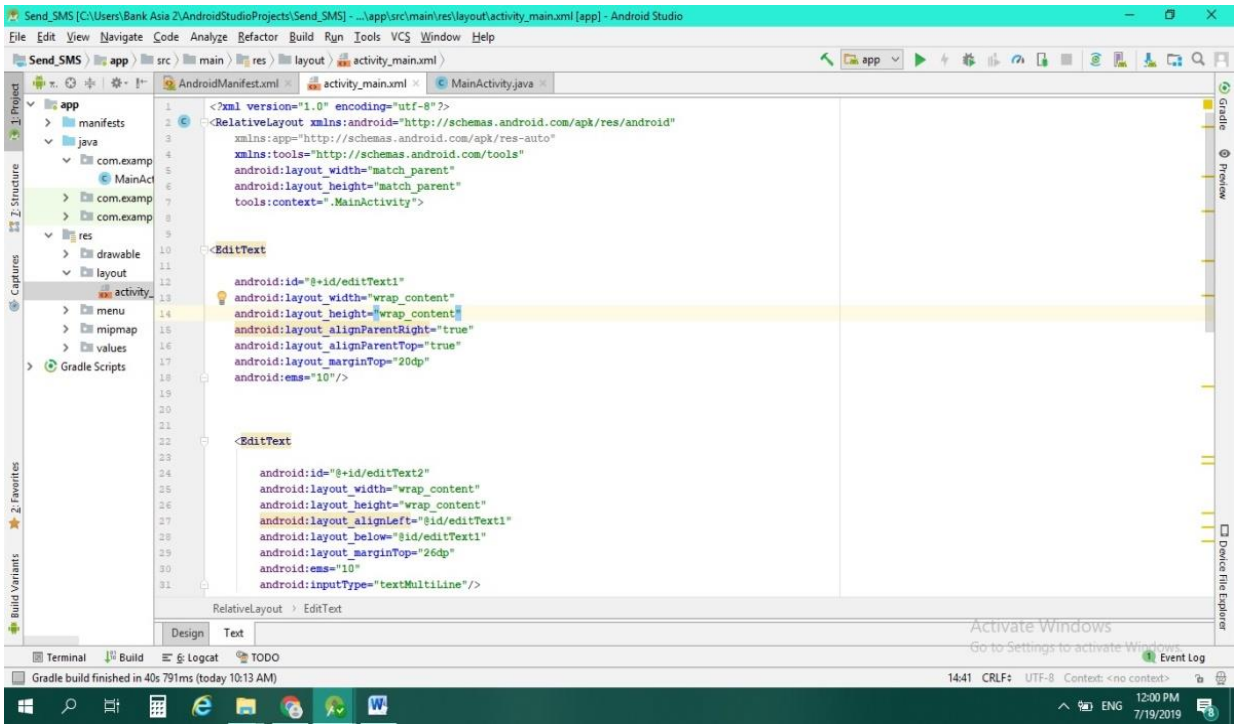


Figure 3.2.6: Send Sms in android of xml file (A)

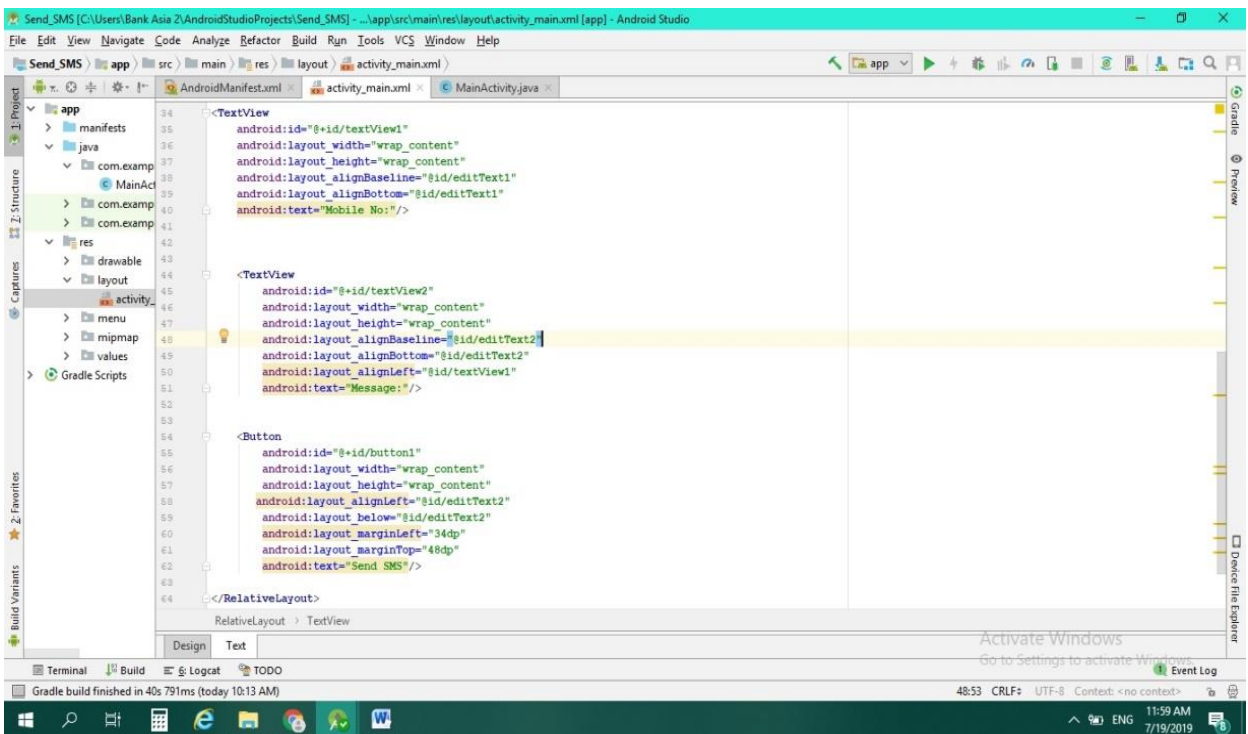


Figure 3.2.6: Send Sms in android of xml file (B)

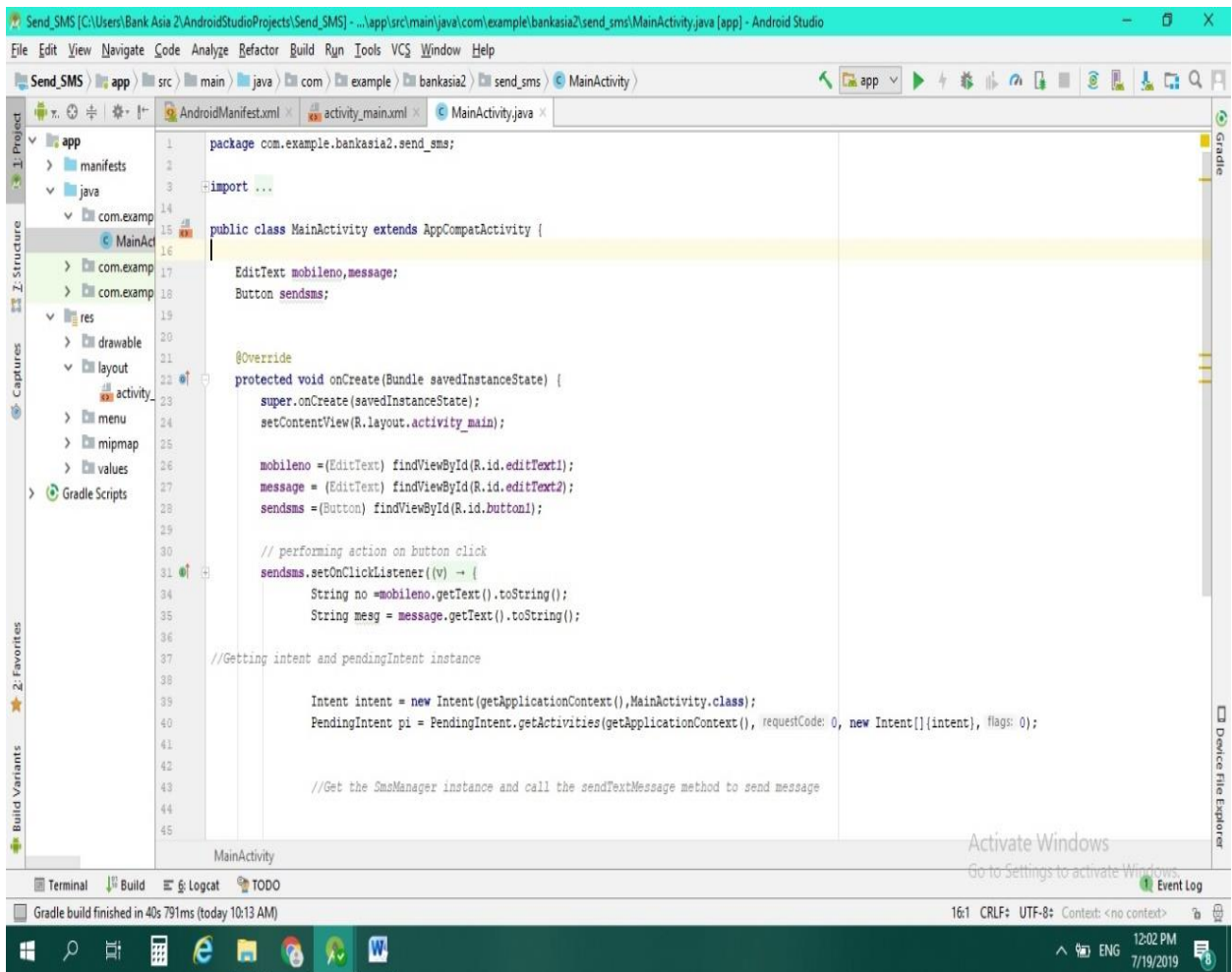


Figure 3.2.7: Send Sms in android of Java file (A)



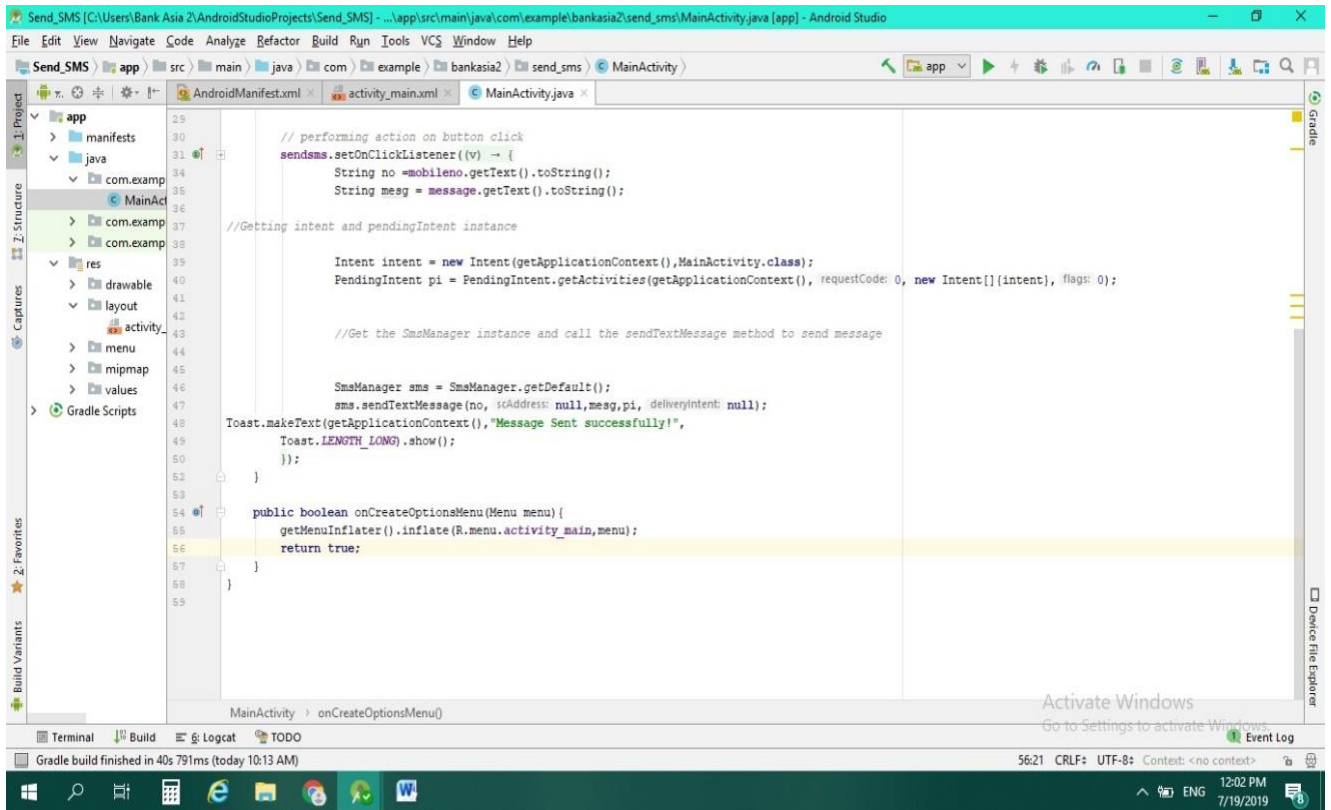


Figure 3.2.7: Send Sms in android of Java file (B)

There are all familiar SMS messages, all commonly use the SMS service that service oldest commonly use mobile communication SMS maximum 160 character it is limit 70 character and alphabet numeric Arabic, Bangla, English send to by phone I is represent sort message service send SMS corrupted SMS show does not message and draft box show. SMS utilized the wireless message. Unlike numerous administrations being used today. Such as MMS and other information driven services, SMS is a fundamental network sort time is uses, every time the message another phone, every user write to message android or Normal phone it case the format message understanding every people voice network the send GSM, TDMA, CDMA organize making generate administration.

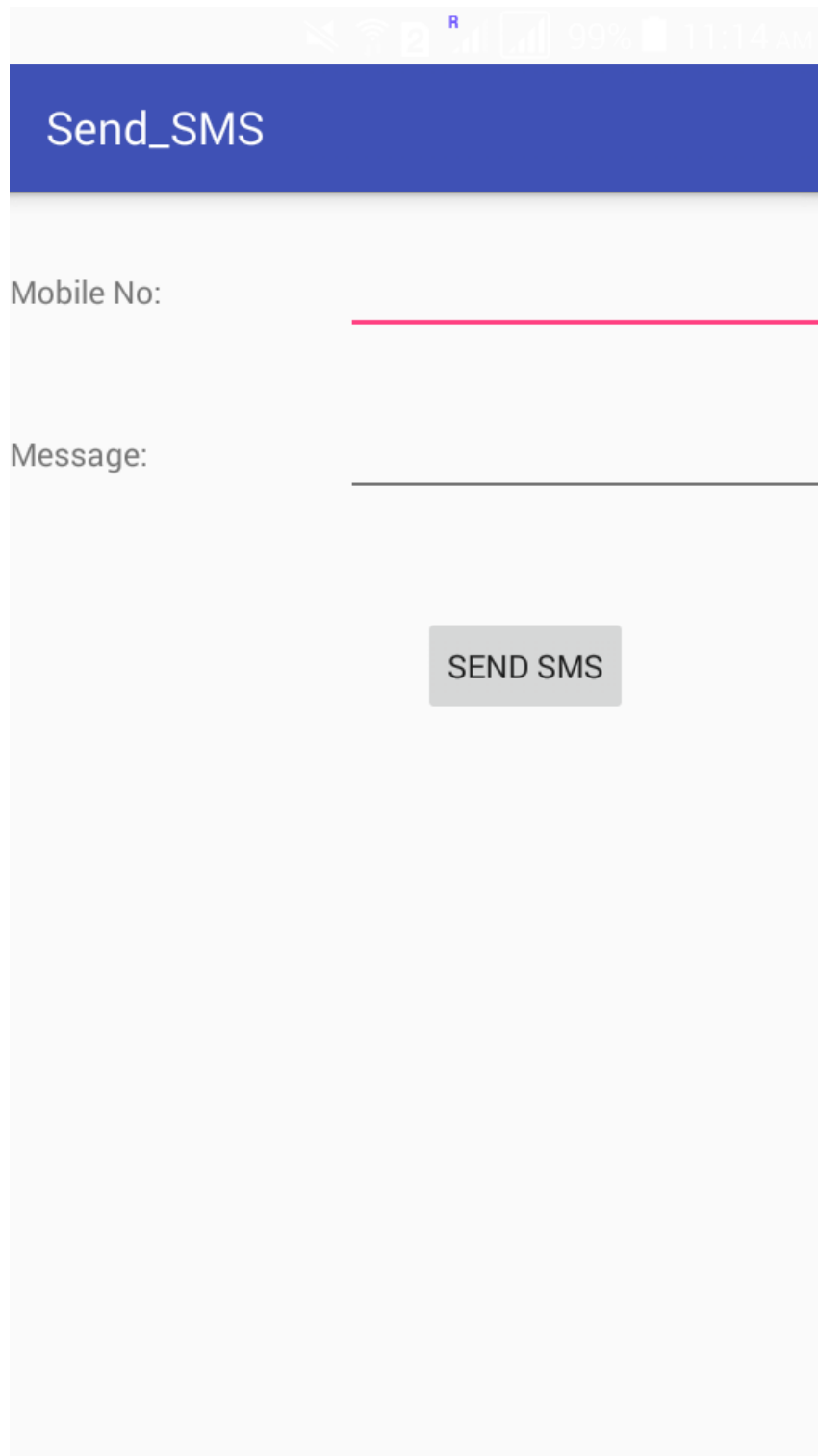


Figure 3.2.8: Design of Sending SMS (A)

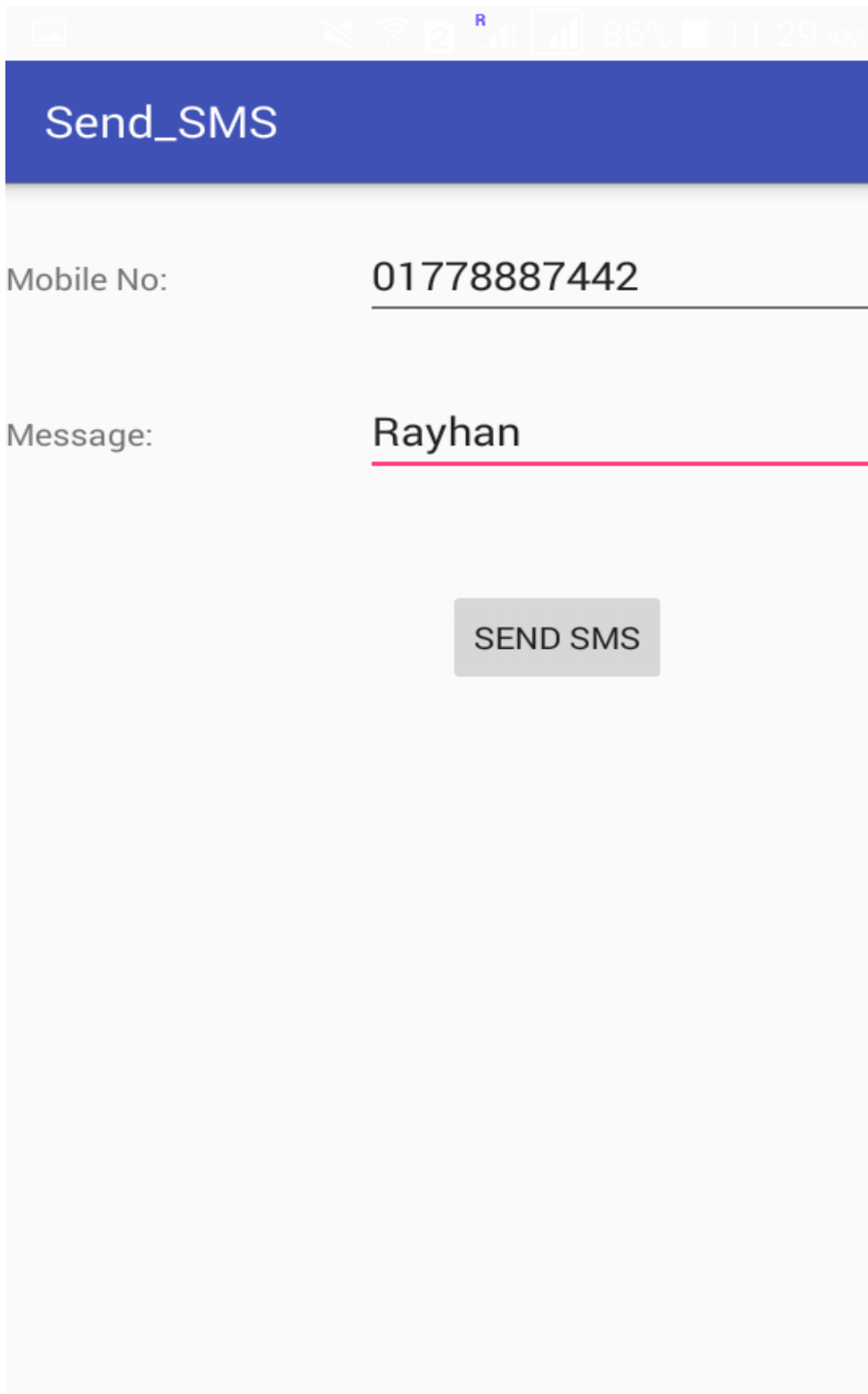
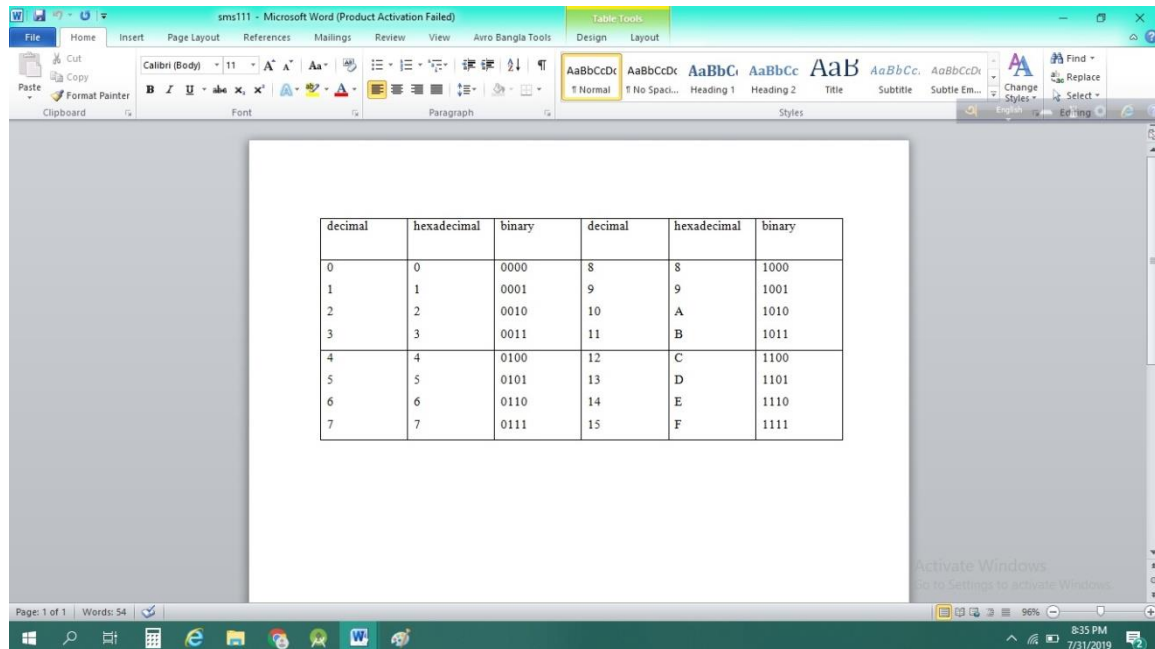


Figure 3.2.8: Design of Sending SMS (B)

## The SMS Standard

The SMS send the in a text message, and bits or binary code send and receiving device communicate with each other length of the message. Digit of send and character and numeric key. Send the digit details describe 0-9 represent zero to nine sms format and character A,B,C,D,E represent fifteen.



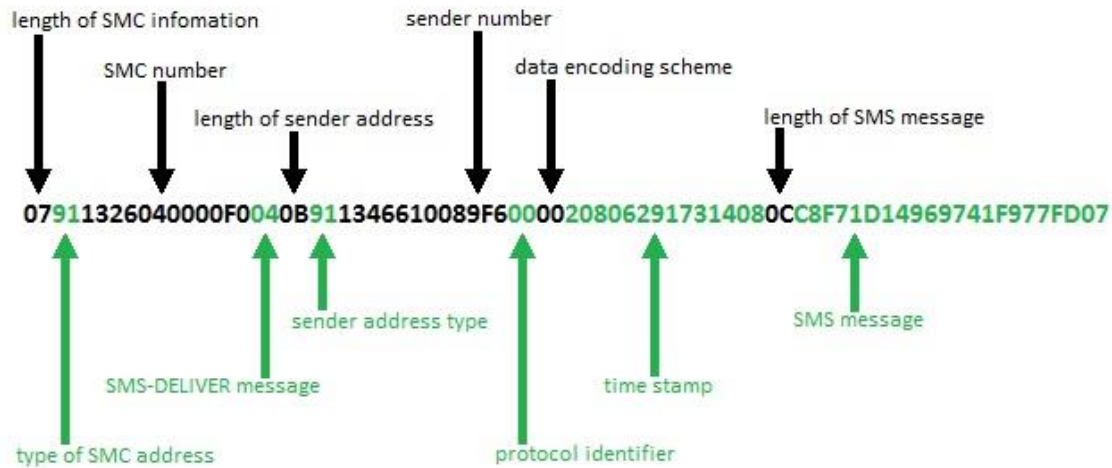
The screenshot shows a Microsoft Word document with a table containing binary, hexadecimal, and decimal conversions. The table is as follows:

| decimal | hexadecimal | binary | decimal | hexadecimal | binary |
|---------|-------------|--------|---------|-------------|--------|
| 0       | 0           | 0000   | 8       | 8           | 1000   |
| 1       | 1           | 0001   | 9       | 9           | 1001   |
| 2       | 2           | 0010   | 10      | A           | 1010   |
| 3       | 3           | 0011   | 11      | B           | 1011   |
| 4       | 4           | 0100   | 12      | C           | 1100   |
| 5       | 5           | 0101   | 13      | D           | 1101   |
| 6       | 6           | 0110   | 14      | E           | 1110   |
| 7       | 7           | 0111   | 15      | F           | 1111   |

Figure 3.2.9: Design in digit of binary

We are SMS PDU string first to the SMC information of binary send the number of address and text message typing number and character. Length of Sender address similarly the correct the every device number identifies and data send encoding this format is the best. every device destination address when the data sent online service this length protocol change another SIM number correctly time the send message time out message is lost value in time. And the connect network other tower short message entities if wireless recipient is switched off, out of range there is a network outage, at the time introduction was a first technology to off such a feature.

### Example SMS PDU string



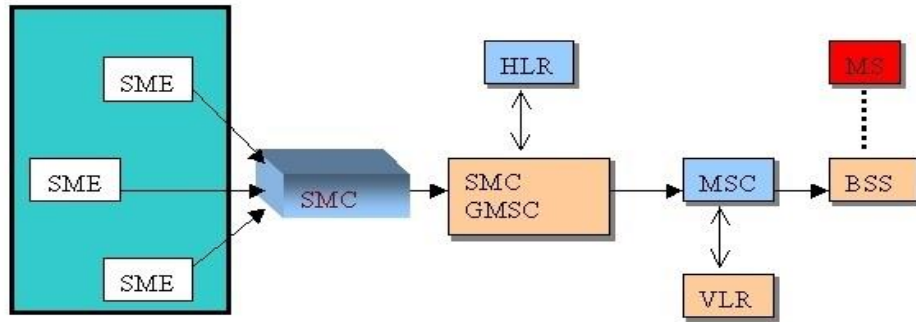
(Reference: wireless developer network)

Figure: 3.2.10: SMS PDU String

There are device information sending and receiving the message and two device are correctly message write type text and sure number is send the text. Text SMS into number and character to the text. Sending device storage the central SMC. The forward thee destination.

### **Sending the Data**

As for the actual transmission of a SMS, text message the usually sending mobile device and receiving stored makes operate channel. SMC currently message uses location. SMC forwarding the data transfer and mobile and other short message. SMC forwarding data and send network BSS destination. SME to the connect SMC delivered when the recipient becomes available again. BSS consists receiver which sends and receive information from mobile station. It is transfer the current mobile station. it is long complicated journey for just 160 characters.



(Reference: wireless developer network)

Figure: 3.2.11: Design of SMC and GMSC

### 3.3 Project Task and Activities

I have completed my internship from sonali bank Limited it. It was best opportunity and working with team. Task work it is changing over accessible contributions to wanted yields, while expending distributed assets. Undertaking movement is regularly utilized as an elective term to extend task. Activities gap venture work into the littlest pieces to make it simpler for undertaking to comprehend what activities to do. Each movement is constantly connected with a clear break objective or target. Conditions and interrelationships between a few exercises interface these exercises to one another and center them around achieving one and a similar objective or goal. Exercises of a venture are constantly quantifiable, time and proposed by create outstanding outcomes. I will thinking portrayed in the accompanying things:

- Design the xml file
- Create the android project
- Create Summary report.
- Update some existing project

### **3.4 Challenges**

Android application development is comes to lot of challenge every employee/intern the different kind challenge problem, it comes to problem solve confidently in the time internship. When online to collect data and restricted the problem I have spent time for learning how to assigned market place professional environment and new people and working.

Android Developer Challenge was first reported in January, with entries being acknowledged from 2 January to 14 April 2008. With members from more than 70 nations and an aggregate of 1,788 sections, the ADC was a quick achievement, and the Android Developers' blog detailed an accommodation rate of 170+ entries every hour on 14 April.

Engineers from the United States represented 33% of the all out applications while the rest originated from nations, for example, Germany, Japan, China, India, Canada, France, UK, and numerous others. The passages spoke to a different scope of use territories, including diversions, person to person communication applications, utilities and efficiency and designer instruments

## CHAPTER 4

### Competencies and Smart Plan

#### 4.1 Competencies Earned

Android application based is working fluently the project success and client want market place is best project market situation. For project example, if anyone provides android project but their information is not responsive enough. That means good project the sector and competence the market if learn basic and technical level working to success. Hard working success is small time. Modern competence sincerely the good project create present front the client. Otherwise you lost value is market place. Own the preferred best policy in the software developer.

#### 4.2 Smart Plan

Most prominently learn to about how to work android application development

- It is critical to all the terminals if you want to performance better.
- Carefully learn about xml file, interface, adapter, Manifest file, apk, and java how to work the management system.
- Create every fault report, summary report, sending SMS and Mail in a way that it
- will responsive on every device the user open. And for doing so use responsive perspective and simple step.
- Check out many devices and smart technology for unique screen resolutions and ideas.
- Release gain idea in a unique way.
- android project provide all time follow the software if any time software is down  
For security reason I can't added more information and any figure for this part.



### 4.3 Reflections

I get the impression that Android supports reflection. Reflection is obviously, a very helpful part of Java and Android advancement. Yet turns about that reflection can regularly be the wellspring of critical log jam inside an Android application. Maybe the most natural method for understanding this is experiencing several genuine examples.

- Less time to finish report
- Results are determined physically.

## CHAPTER 5

### Conclusion and Future Career

#### 5.1 Discussion and Conclusion

From that internship, android is the most popular operating system in the world. i will discuss the importance of the internship program android operating system use by java programming and kotlin. For all practical experience, education, and skill internship program develop my session, analysis. Project on a subject of Send SMS in android also maintenance to develop it in a successful manner. Project Appropriate Android application is required thus. The most obvious people talk about android smartphone the most end user operating system. Client between service and manage of the client opinion ridiculing, pharming and different malevolent I will to collect form the internship will benefit me in my near future.

#### 5.2 Scope for Further Career

Internship goals provide is very good clear concept about practical and semantic about android base system. My internship implemented a proof of concept for a decision making system using imitated knowledge. I am attentive working the job. Finding the job or career good job and market place. Own the present performance how to challenge the market place I am known to people present our project and the simultaneously.

- Work to the Software company
- Good Communication
- Ability to team work
- Work as an Android Base System

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## Appendix A

### Internship Reflections

I get the impression that Android supports reflection Reflection is obviously, a very helpful part of Java and Android advance ment. Yit turns about that reflection can regularly be the wellspring of critical log jam inside an Android application. Maybe the most natural method for understanding this is experiencing several genuine examples.

- Less time to finish report
- Results are determined physically.

## Appendix B

### Company Details

|                            |   |
|----------------------------|---|
| Name of the Company        | Somali Bank Limited   |
| Chairman                   | Mr. Md. Ashraful Maqbul   |
| Company Secretary          | Mr. Md.Hasanul Banna  |
| Legal Status               | Public Limited Company  |
| Genesis                    | Emerged as Nationalized Commercial Bank in 1972, following the Bangladesh Bank (Nationalization) Order No. 1972 |
| Date of Incorporation      | 03 June, 2007   |
| Date of Vendor's Agreement | 15 November, 2007   |
| Registered Office          | 35-42, 44 Motijheel Commercial Area, Dhaka, Bangladesh  |

|                    |                                     |
|--------------------|-------------------------------------|
| Authorized Capital | Taka 6000.00 Core                   |
| Paid-up Capital    | Taka 4530.00 Core                   |
| Number of Employee | 17,051( Officers-15741+Staff-1310 ) |
| Number of Branches | 1215                                |
| Phone-PABX         | 9550426-31, 33, 34, 9552924         |
| FAX                | 88-02-9561410, 9552007              |
| SWIFT              | BSONBDDH                            |
| Website            | www.sonalibank.com.bd               |
| E-mail             | itd@sonalibank.com.bd               |