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Faculty of

Electronics and Communication Engineering

Engineering book Solution- An Android Application

B.Sc Project on Electronics & Telecommunication Engineering

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ANDROID

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Hereby I confirm that the present project was prepared under my supervision and that is fulfills all the requirements for the Bachelor degree of Electronics & Telecommunication Engineering.

…… ……

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Author's Statement

Hereby I Declare that the present project was prepared by me and non of its contents was obtained by means that are against the law.

The project has never before been a subject of any procedure of obtaining an academic degree.

Moreover, I declared that the present version of the project is identical.

…… ……

Tahmina Afroz Md. Anisur Rahman

Acknowledgement

First I would like to express my sincere gratitude to God that I could complete my project. Then I am externally grateful to parents for their constant support through put my academic work.

I am extremely fortunate towards my supervisor Mustafa Mahmud Hussain for helping me throughout the project. He helped me in every possible way for completing my project.

I am also thanks to Piyal and Amit for helping me to complete my project.

Abstract

Modern hand held devices such as smart phones have become increasingly powerful in this era. As mobile devices become more like PCs they will come to replace objects we tend to carry around such as camera, checkbook, credit cards, mp3 player etc. In short we will be using them to accomplish our daily task. Our Engineering book Solution application takes advantage of many solutions and techniques for the android platform. This application is designed in such way that not only students use our ebooks apps but also teacher can also use our ebooks apps. They can use our apps in anywhere without carry any book. It is easy to get information from our Engineering book Solution application.

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Introduction

Android is an operating system based on the Linux kernel, and designed primarilyfor touch screen mobile devices such as smart phones and tablet computers. Initially developed by Android, Inc., which Google backed financially and later bought in 2005, Android was unveiled in 2007 along with the founding of the Open Handset Alliance—a consortium of hardware, software, and telecommunication companies devoted to advancing open standards for mobile devices. The first publicly available smart phone running Android, the HTC Dream, was released on October 22, 2008.

The user interface of Android is based on direct manipulation, using touch inputs that loosely correspond to real-world actions, like swiping, tapping, pinching, and reverse pinching to manipulate on-screen objects. Internal hardware—such as accelerometers, gyroscopes, and proximity sensors—is used by some applications to respond to additional user actions, for example adjusting the screen from portrait to landscape depending on how the device is oriented. Android allows users to customize their home screens with shortcuts to applications and widgets, which allow users to display live content, such as emails and weather information, directly on the home screen. Applications can further send notifications to the user to inform them of relevant information, such as new emails and text messages.

Android's source code is released by Google under the Apache License; this permissive licensing allows the software to be freely modified and distributed by device manufacturers, wireless carriers and enthusiast developers. Most Android devices ship with a combination of open source and proprietary software. As of July 2013, Android has the largest number of applications ("apps"), available for download in Google Play store which has had over 1 million apps published, and over 50 billion downloads. A developer survey conducted in April–May 2013 found that Android is the most used platform among developers: it is used by 71% of the mobile developer’s population.

Android is popular with technology companies which require a ready-made, low-cost and customizable operating system for high-tech devices. Despite being primarily designed for phones and tablets, it also has been used in televisions, games consoles, digital cameras, and other electronics. Android's open nature has encouraged a large community of developers and enthusiasts to use the open-source code as a foundation for community-driven projects, which add new features for advanced users or bring Android to devices which were officially, released running other operating systems as of May 2012, Android became the most popular mobile OS, having the largest installed base, and is a market leader in most countries including the United States; there it has had the highest installed base of mobile phones for years. In the third quarter of 2013, Android's share of the global smart phone shipment market—led by Samsung products—was 81.3%, the highest ever. In most markets Android-powered phones is the most popular comprising more than half of the overall smart phone sales, including the United States market starting with the September– November 2013 period. The operating system's success has made it a target for patent litigation as part of the so-called "Smartphone" between technology companies. As of September 2013, one billion Android devices have been activated.

Chapter 2

2.1 History

Android, Inc. was founded in Palo Alto, California in October 2003 by Andy Rubin (co-founder of Danger), Rich Miner (co-founder of Wildfire Communications, Inc.), Nick Sears (once VP at T-Mobile), and Chris White (headed design and interface development at WebTV) to develop, in Rubin's words "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, when it was realized that the market for the devices was not large enough, and diverted their efforts to producing a smart phone operating system to rival those of Symbian and Windows Mobile. Despite the past accomplishments of the founders and early employees, Android Inc. operated secretly, revealing only that it was working on software for mobile phones. That same year, Rubin ran out of money. Steve Perlman, a close friend of Rubin, brought him $10,000 in cash in an envelope and refused a stake in the company.
Google acquired Android Inc. on August 17, 2005; key employees of Android Inc., including Rubin, Miner, and White, stayed at the company after the acquisition. Not much was known about Android Inc. at the time, but many assumed that Google was planning to enter the mobile phone market with this move. At Google, the team led by Rubin developed a mobile device platform powered by the Linux kernel. Google marketed the platform to handset makers and carriers on the promise of providing a flexible, upgradable system. Google had lined up a series of hardware component and software partners and signaled to carriers that it was open to various degrees of cooperation on their part.

Speculation about Google's intention to enter the mobile communications market continued to build through December 2006. The unveiling of the iPhone, a touch screen-based phone by Apple, on January 9, 2007 had a disruptive effect on the development of Android. At the time, a prototype device codenamed "Sooner" had a closer resemblance to a BlackBerry phone, with no touchscreen, and a physical, JQWERTY keyboard. Work immediately began on re-engineering the OS and its prototypes to combine traits of their own designs with an overall experience designed to compete with the iPhone. In September 2007, *InformationWeek* covered an Evalueserve study reporting that Google had filed several patent applications in the area of mobile telephony.

On November 5, 2007, the Open Handset Alliance, a consortium of technology companies including Google, device manufacturers such as HTC, Sony and Samsung, wireless carriers such as Sprint Nextel and T-Mobile, and chipset makers such as Qualcomm and Texas Instruments, unveiled itself, with a goal to develop open Standards for mobile devices. That day, Android was unveiled as its first product, a mobile device platform built on the Linux kernel version 2.6. The first commercially available smart phone running Android was the HTC Dream, released on October 22, 2008.

In 2010, Google launched its Nexus series of devices – a line of Smartphone's and tablets running Android operating system, and built by a manufacturing partner. HTC collaborated with Google to release the first Nexus Smartphone, the Nexus One. The series has since been updated with newer devices, such as the Nexus 5 phone and Nexus 7 tablet, made by LG and Asus respectively. Google releases the Nexus phones and tablets to act as their flagship Android devices, demonstrating Android's latest software and hardware features. On March 13, 2013, it was announced by Larry Page in a blog post that Andy Rubin had moved from the Android division to take on new projects at Google. He was replaced by SundarPichai, who also continues his role as the head of Google's Chrome division, which develops Chrome OS.

Since 2008, Android has seen numerous updates which have incrementally improved the operating system, adding new features and fixing bugs in previous releases. Each major release is named in alphabetical order after a dessert or sugary treat; for example, version 1.5 *Cupcake* was followed by 1.6 *Donut*. The latest released version is 4.4.2 *KitKat*, which was released on December 9, 2013.

- ## Interface

Android's user interface is based on direct manipulation, using touch inputs that loosely correspond to real-world actions, like swiping, tapping, pinching, and reverse pinching to manipulate on-screen objects. The response to user input is designed to be immediate and provides a fluid touch interface, often using the vibration capabilities of the device to provide haptic feedback to the user. Internal hardware such as accelerometers, gyroscopes and proximity sensors are used by some applications to respond to additional user actions, for example adjusting the screen from portrait to landscape depending on how the device is oriented, or allowing the user to steer a vehicle in a racing game by rotating the device, simulating control of a steering wheel.

Android devices boot to the home screen, the primary navigation and information point on the device, which is similar to the desktop found on PCs. Android homescreens are typically made up of app icons and widgets; app icons launch the associated app, whereas widgets display live, auto-updating content such as the weather forecast, the user's email inbox, or a news ticker directly on the homescreen. A homescreen may be made up of several pages that the user can

swipe back and forth between, though Android's homescreen interface is heavily customisable, allowing the user to adjust the look and feel of the device to their tastes. Third-party apps available on Google Play and other app stores can extensively re-theme the homescreen, and even mimic the look of other operating systems, such as Windows Phone. Most manufacturers, and some wireless carriers, customise the look and feel of their Android devices to differentiate themselves from their competitors.

Present along the top of the screen is a status bar, showing information about the device and its connectivity. This status bar can be "pulled" down to reveal a notification screen where apps display important information or updates, such as a newly received email or SMS text, in a way that does not immediately interrupt or inconvenience the user. Notifications are persistent until read (by tapping, which opens the relevant app) or dismissed by sliding it off the screen. Beginning on Android 4.1, "expanded notifications" can display expanded details or additional functionality; for instance, a music player can display playback controls, and a "missed call" notification provides buttons for calling back or sending the caller an SMS message.

Android provides the ability to run applications which change the default launcher and hence the appearance and externally visible behavior of Android. These appearance changes include a multi-page dock or no dock, and many more changes to fundamental features of the user interface.

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- **Applications**

Android has a growing selection of third party applications, which can be acquired by users either through an app store such as Google Play or the Amazon Appstore, or by downloading and installing the application's APK file from a third-party site. Google Play Store allows users to browse, download and update applications published by Google and third-party developers, and the Play Store client application is pre-installed on devices that comply with Google's compatibility requirements and license the Google Mobile Services software. The client application filters the list of available applications down to those compatible with the user's device, and developers may restrict their applications to particular carriers or countries for business reasons. Purchases of unwanted applications can be refunded within 15 minutes of the time of download, and some carriers offer direct carrier billing for Google Play application purchases, where the cost of the application is added to the user's monthly bill.

As of July 2014, there are more than one million applications available for Android in Play Store. As of 2014, 48 billion apps have been installed from Google Play store.

Applications ("apps"), that extend the functionality of devices, are developed primarily in the Java programming language language using the Android software development kit (SDK). The SDK includes a comprehensive set of development tools, including a debugger, software libraries, a handset emulator based on QEMU, documentation, sample code, and tutorials. The officially supported integrated development environment (IDE) is Eclipse using the Android Development Tools (ADT) plug-in. Other development tools are available, including a Native Development Kit for applications or extensions in C or C++, Google App Inventor, a visual environment for novice programmers, and various cross platform mobile web applications frameworks.

It was announced in January 2014 that Chrome HTML5 web applications should become available, using a compatibility layer from the open source Apache Cordova framework to allow such applications to be wrapped in a native application shell, enabling their distribution over Google Play.

Chapter 3

- **Revolution in Mobile Experience**

Once upon a time the only technological device that required an operating system was a personal computer, then with the arrival of smartphones things changed. Initially it was just one or two high-end mobile phones that ran on operating systems, but with the success of these particular models more and more models started using smartphone operating systems. One smartphone operating system that has truly revolutionized the whole idea of a mobile phone is Android.

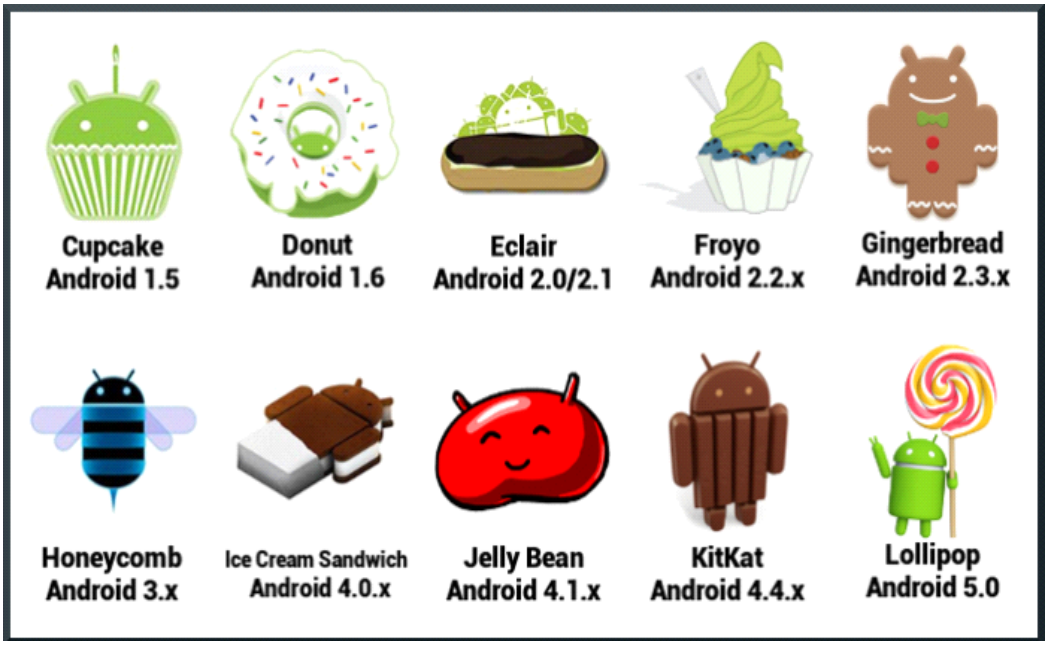

Fig: 1.1Android **revolution from version Cupcake 1.5 to Lollipop 5.0**

One Smartphone operating system that has truly revolutionized the whole idea of a mobile phone is Android. After the initial success of Android run phones by HTC (Dream), more and more Smartphone manufacturers joined the android project and member of the Open Handset Alliance (OHA) is increased. This resulted in Android becoming the most widely used Smartphone in the market.

The open source and licensing nature of Android allows the developers and device manufacturers to modify the software according to their needs, As a result of this constant development and innovation, Android has been adapted to work on technological devices other than smart phones.

Android phones are much more cost effective than its rivals and offer a more stimulating and fulfilling user experience makes Android a preferred choice for many users.

Worldwide Mobile Phone Sales Grew 3.6 Percent in Second Quarter of 2013

Worldwide mobile phone sales to end users totaled 435 million units in the second quarter of 2013, an increase of 3.6 percent from the same period last year, according to Gartner, Inc. Worldwide smartphone sales to end users reached 225 million units, up 46.5 percent from the second quarter of 2012. Sales of feature phones to end users totaled 210 million units and declined 21 percent year-over-year.

"Smartphone's accounted for 51.8 percent of mobile phone sales in the second quarter of 2013, resulting in Smartphone sales surpassing feature phone sales for the first time," said Anshul Gupta, principal research analyst at Gartner.

Asia/Pacific, Latin America and Eastern Europe exhibited the highest Smartphone growth rates of 74.1 percent, 55.7 percent and 31.6 percent respectively, as Smartphone sales grew in all regions.

Worldwide Smartphone Sales to End Users by Operating System in 2013 (Thousands of Units)

	20132013 Market		20122012 Market	
Operating System	**Units**	**Share (%)**	**Units**	**Share (%)**
Android	758,719.9	78.4	451,621.0	66.4
iOS	150,785.9	15.6	130,133.2	19.1
Microsoft	30,842.9	3.2	16,940.7	2.5
BlackBerry	18,605.9	1.9	34,210.3	5.0
Other OS	8,821.2	0.9	47,203.0	6.9
Total	**967,775.8**	**100.0**	**680,108.2**	**100.0**

Table 1.1 worldwide Smartphone sales by operating system,Source: Gartner (February 2014)[http://www.gartner.com/newsroom/id/2665715)

- **Platform usage**

Naturally, android itself is not a single operating system. It comes in many versions with new major updates being released every half year or even more frequently. The most up-to –date chart (figure 1.2) from android Developer [AND] web site shows a distribution of android versions.

The table below provides a breakdown of Android versions, based on devices accessing Play Store as of November 2, 2015

Version	Codename	API	Distribution
2.2	Froyo	8	0.2%
2.3.3 - 2.3.7	Gingerbread	10	3.8%
4.0.3 - 4.0.4	Ice Cream Sandwich	15	3.3%
4.1.x	Jelly Bean	16	11.0%
4.2.x		17	13.9%
4.3		18	4.1%
4.4	KitKat	19	37.8%
5.0	Lollipop	21	15.5%
5.1		22	10.1%
6.0	Marshmallow	23	0.3%

Data collected during a 7-day period ending on November 2, 2015.
Any versions with less than 0.1% distribution are not shown.

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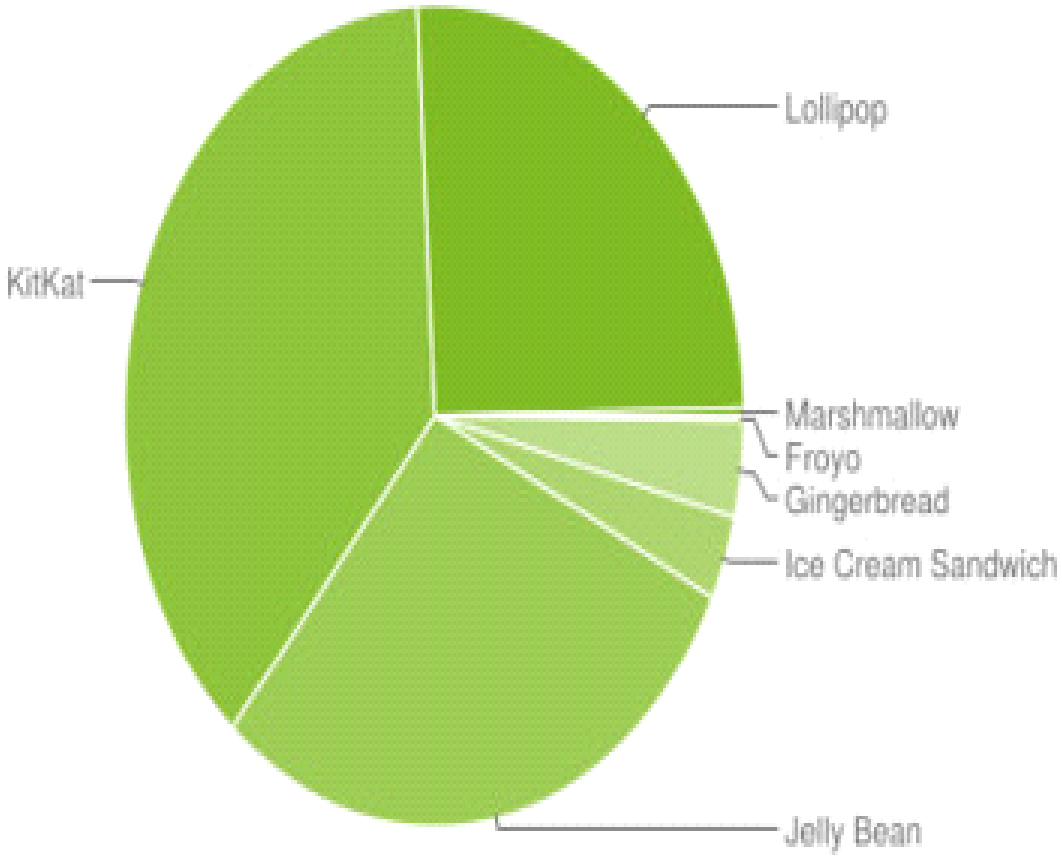

Fig 1.2: The relative no of devices accessing the play store recently and running a given version of the android platform , as of November 2,2015 [http://developer.android.com/about/dashboards/index.html

Chapter 4

Android Architecture

Linux Kernel lies on the bottom of the Android Architecture and acts as anabstraction layer between the hardware and the rest of the stack. The kernel provides drivers for the different parts of the mobile phone, as well as handling the power management. Also, security, memory management, process management and network stack are handled by the Linux kernel.

Libraries provide a set of C/C++ libraries which are used by various componentsof the Android system. The Media Framework libraries are used to store and playback video as well as images. *SQLite* is a lightweight relationship database available for all applications. SGL are the underlying 2D graphics engine, while the 3D libraries are based on an *OpenGL ES* implementation. *LibWebCore* is a web browser engine.

All of these libraries and their capabilities are available for the developer through the Android application framework.

Android Runtime includes core libraries and the Dalvik VM, [31]. The core librariesprovide most of the basic functionality available in the core libraries of the Java programming language. The Dalvik VM is written as to reduce memory footprint and enable a device to run multiple VM's effectively.

Figure 2.1 depicts the Android architecture.

The Application Framework architecture allows for reuse of components. Any application can make use of the capabilities of a component and also publish its own capabilities. Every application has underlying components, including:

- Views consisting of i.e buttons, lists, text boxes and a web browser, all used to build an application.

- An Activity Manager that controls navigation and manages the life cycle of an application.

- A Notification Manager that enables all applications to have notifications displayed as alerts in the status bar.

- A Resource Manager providing access to non-code resources such as localized strings, graphics, and layout files. Etc

Chapter 5

- **Application Frame Work**

Even through the android id a relatively new system, it comes with good documentation, Which can be found on the official development page ([AND]). There is a number of publications and course books for people who seek basic information and introduction to the system. Additionally, a very large community of developers is actively exchanging question and answer on web service like google group ([ADG]), android blog ([ADB]) or stack overflow ([ASO]). It does not make sense to quote big fragments of android developers guide. Instead, This section covers the fundamental aspects of designing an Android application which are necessary in order to understand the following discussion about TravelBD app.

- **Main application components**

To begin to program for android we need some basic, because some elements are very different, even if programming an application in Android uses the java language, therefore, an object oriented language.
All Android application contain more of the following components

5.2.1 Activity

An activity is a user interference that allows the user to interact with the screen, to perform actions. For example, a text messaging application could have an activity that displays a list of contacts to send messages. Once the contact is selected ,activity could send information to a second activity that could serve to send the message to the contact.

When an application is launched, what are displays is the result of an activity. At the code level, for create an activity; we must create a class that extend the activity class. An activity has a required on create() method. To interact with the program, through the activity, there must be something displayed, that is why the activity, contains what is called views.

5.2.2 View

A view is the basic building block for user interference components. A view occupied a rectangular area on the screen. View is the base class for the widget, which are used to create interactive UI components. There is different kinds of view, for example a ListView is able to display only an interactive list of what we want to display, while we webview allow us to display a webpage. As said before, a view occupies a rectangular area on the screen. To organize these rectangles on the screen, there is a text file written in the XML for every different screen.

5.2.3 XML

XML means Extensible Markup Language. Android provides a straight forward XML vocabulary that corresponds to the view classes and sub classes. The goal of using Android XML vocabulary, is to quickly design UI layouts and the screen elements they contain, in the same way that creating web pages in HTML: with a series of nested elements.

5.2.4 Intent

An activity can of course start another one, even if it but to do this, it will need special object called intent. Intent is basic description of an operation to be performed. It can launch an Activity, send a broadcastintent to any interested Broadcast receiver components, and communicate with a background service. Intent performs binding between the codes indifferent applications. It can be thought of as the link between activities. It is possible to add some information to an intent, thanks to an object called bundle that we add to the intent thanks to the method.

Intent.putExtras(Bundle objectbunble);

5.3 Android Manifest

AndroidMainifest.xml file is necessary for all android applications and must have this name in its root directory. In the manifest we can find essential information about the application for the android system, information that the system must have before it can run any of the application's code. Here is what we can find in the

Android manifest:

-The name of the Java package for the application. The package name serves as a unique identifier for the application.

-The description of the components of the application: the activities, services, broadcast receivers, and content providers that the application is composed of and under what conditions they can be launched.

-The process that will host application components.

-The permissions the application must have in order to access protected parts of the API and interact with other applications.

-The permissions that others are required to have in order to interact with the application's components.

-The list of tee instruments classes that provide profiling and other information as the application is running. These declarations are present in the manifest only while the application is published.

-The minimum level of the Android API that the application requires.

-The list of the libraries that the application must be linked against.

With all these elements, an application can be created

Chapter 6

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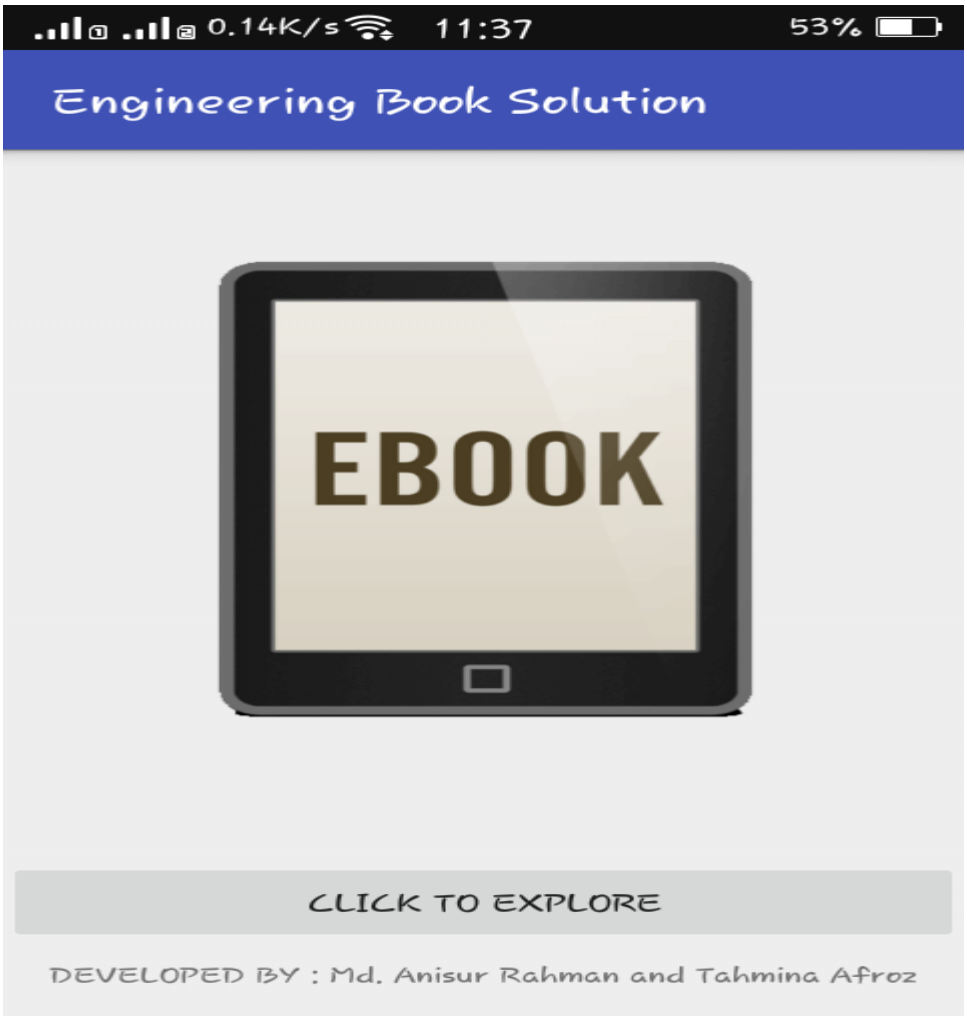

This is the first screen. If you touch the button then the next page or “MENU” page will come.

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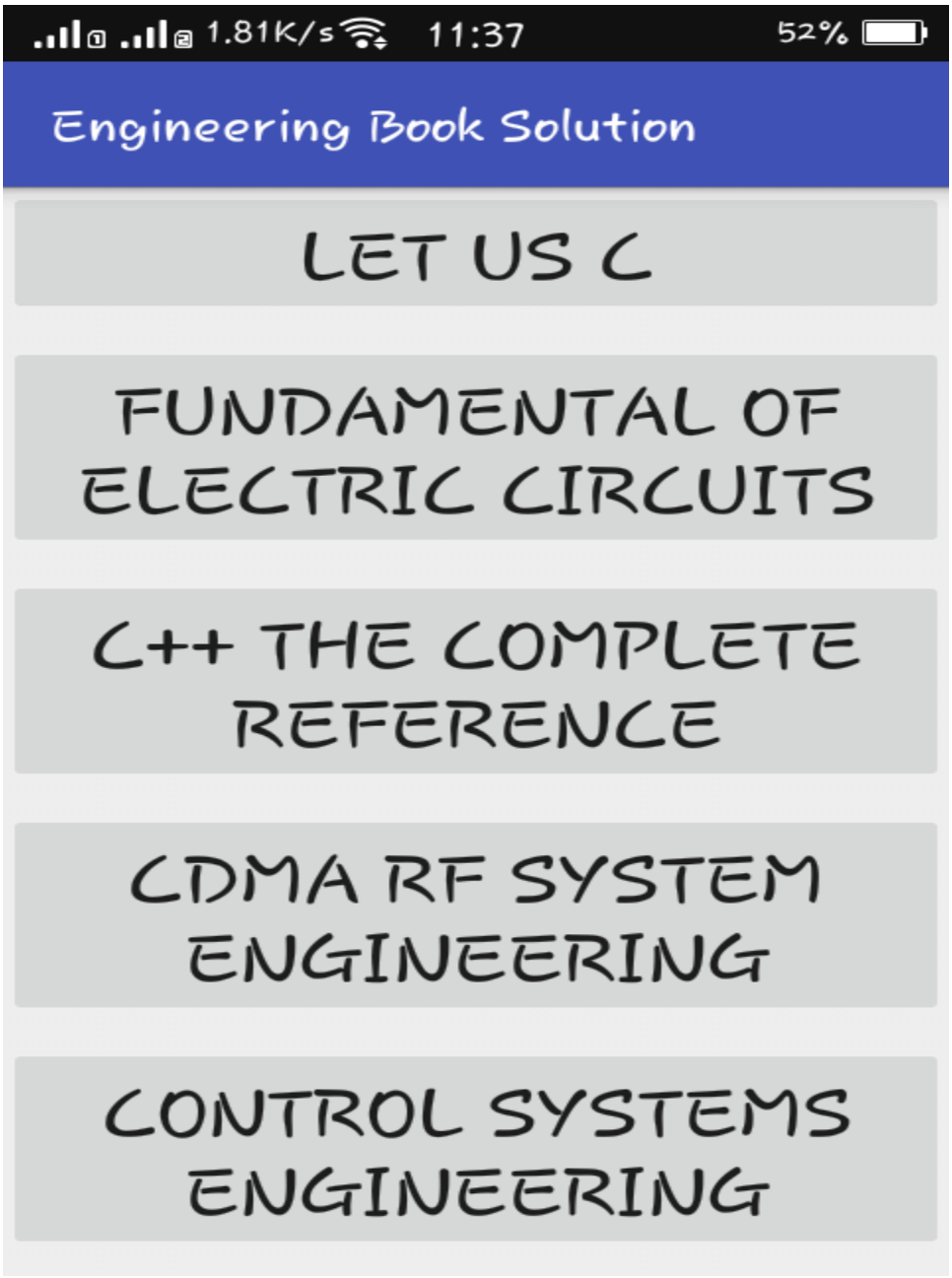
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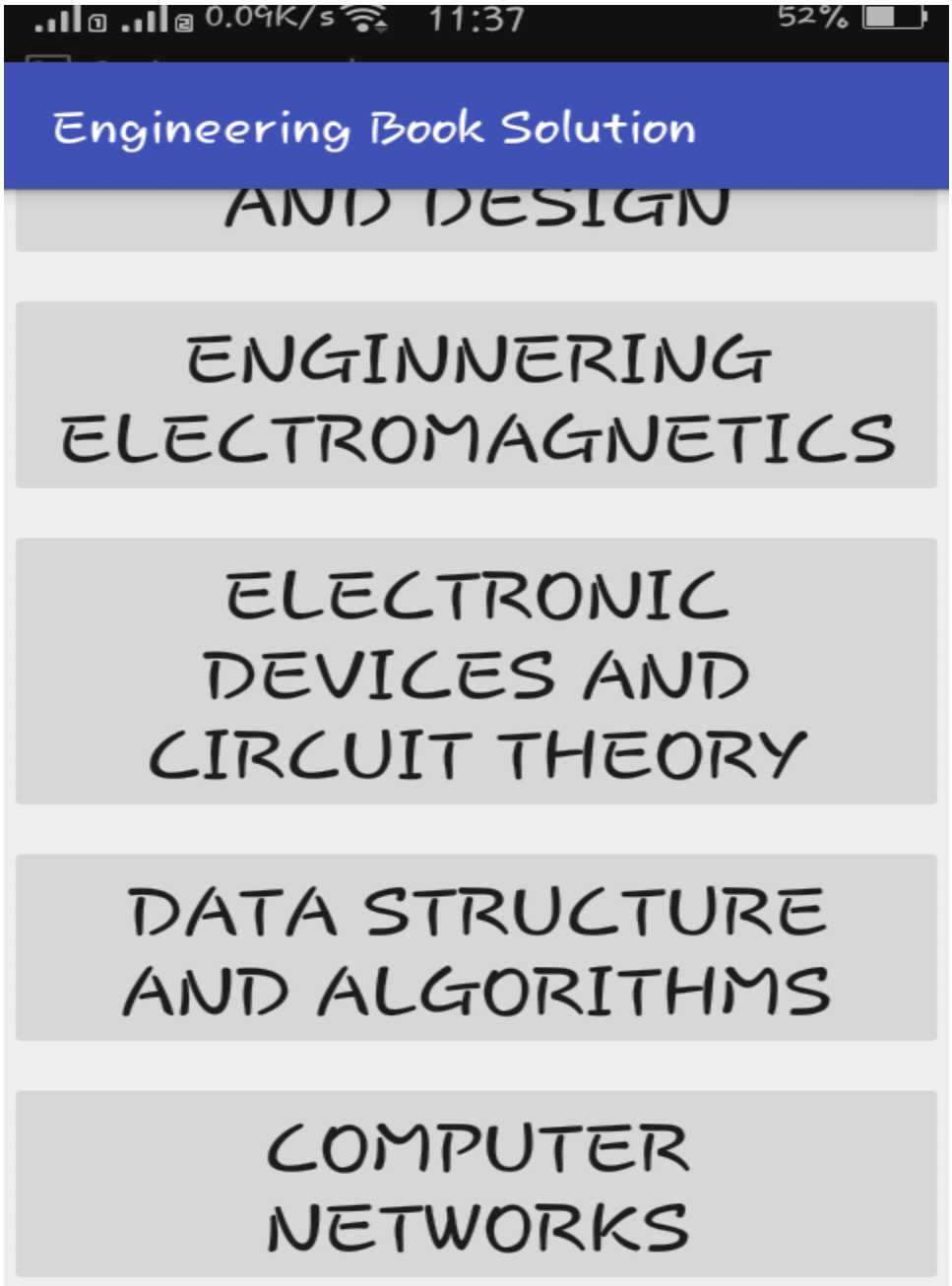
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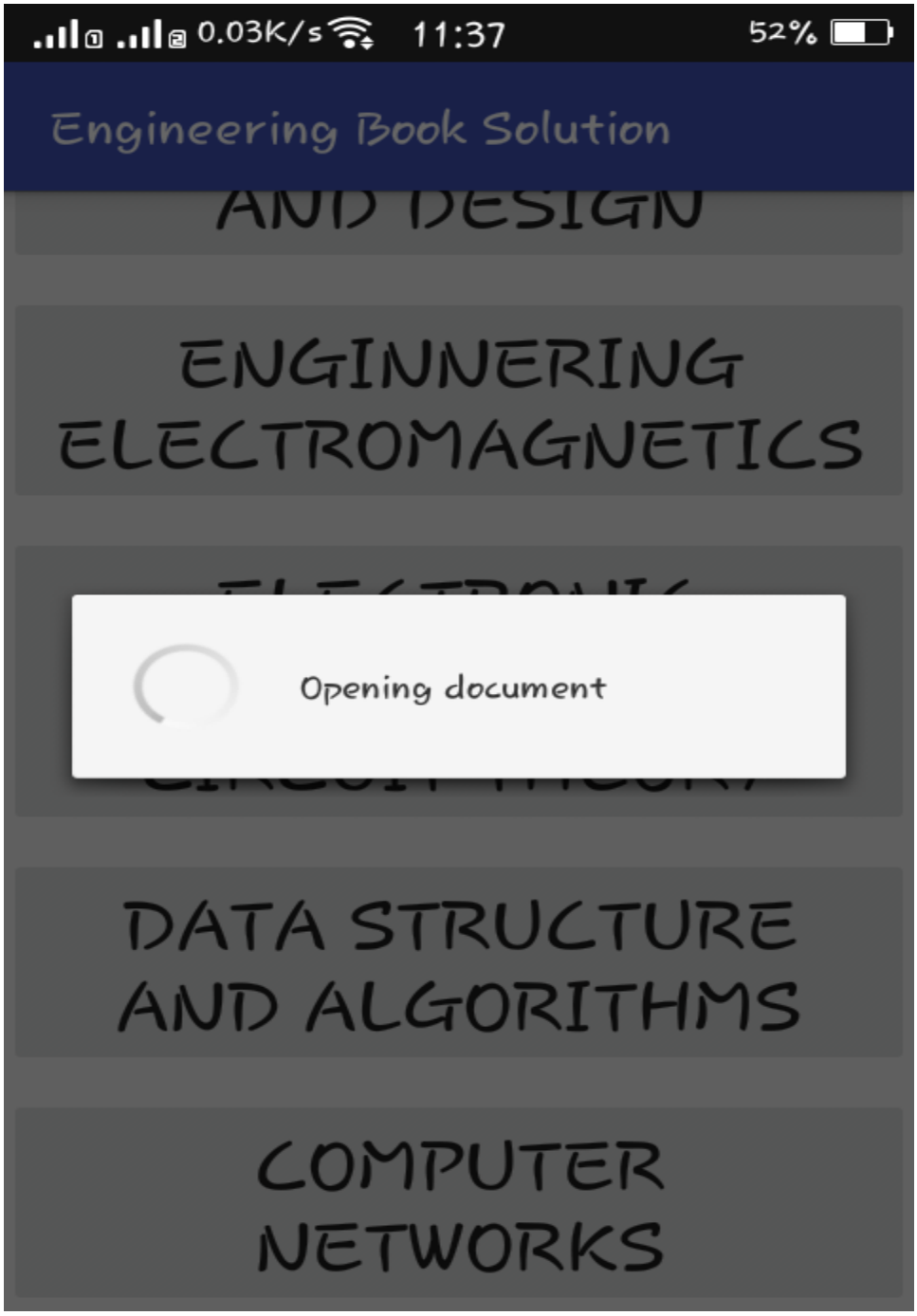
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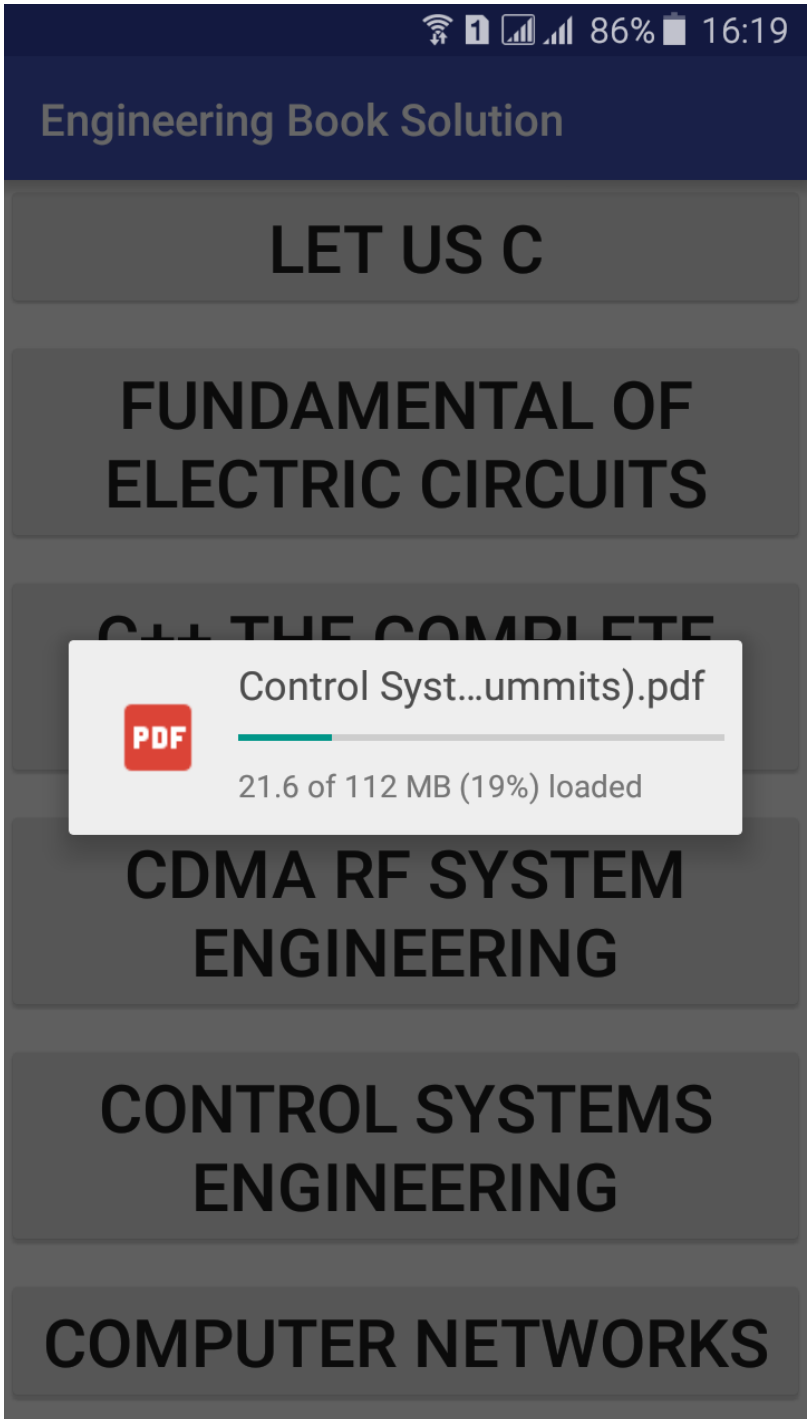
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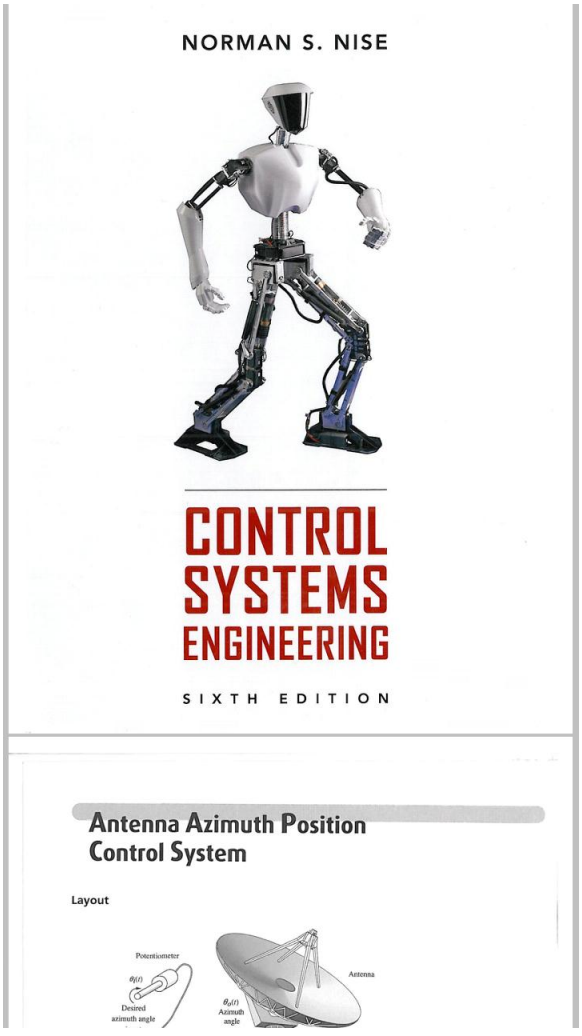
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CONTROL SYSTEMS ENGINEERING
SIXTH EDITION
Antenna Azimuth Position Control System
Layout
Potentiometer
Desired azimuth angle
Antenna
Azimuth angle

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1.1 Introduction

Control systems are an integral part of modern society. Numerous applications are all around us: The rockets fire, and the space shuttle lifts off to earth orbit; in splashing cooling water, a metallic part is automatically machined; a self-guided vehicle delivering material to workstations in an aerospace assembly plant glides along the floor seeking its destination. These are just a few examples of the automatically controlled systems that we can create.

We are not the only creators of automatically controlled systems; these systems also exist in nature. Within our own bodies are numerous control systems, such as the pancreas, which regulates our blood sugar. In time of "fight or flight," our adrenaline increases along with our heart rate, causing more oxygen to be delivered to our cells. Our eyes follow a moving object to keep it in view; our hands grasp the object and place it precisely at a predetermined location.

Even the nonphysical world appears to be automatically regulated. Models have been suggested showing automatic control of student performance. The input to the model is the student's available study time, and the output is the grade. The model can be used to predict the time required for the grade to rise if a sudden increase in study time is available. Using this model, you can determine whether increased study is worth the effort during the last week of the term.

Control System Definition

A control system consists of *subsystems* and *processes* (or *plants*) assembled for the purpose of obtaining a desired *output* with desired *performance*, given a specified *input*. Figure 1.1 shows a control system in its simplest form, where the input represents a desired output.

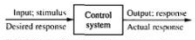

FIGURE 1.1 Simplified description of a control system

For example, consider an elevator. When the fourth-floor button is pressed on the first floor, the elevator rises to the fourth floor with a speed and floor-leveling accuracy designed for passenger comfort. The push of the fourth-floor button is an *input* that represents our desired *output*, shown as a step function in Figure 1.2. The *performance* of the elevator can be seen from the elevator response curve in the figure.

Two major measures of performance are apparent: (1) the transient response and (2) the steady-state error. In our example, passenger comfort and passenger patience are dependent upon the transient response. If this response is too fast, passenger comfort is sacrificed; if too slow, passenger patience is sacrificed. The steady-state error is another important performance specification since passenger safety and convenience would be sacrificed if the elevator did not properly level.

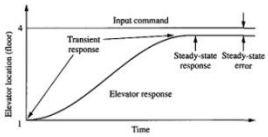

FIGURE 1.2 Elevator response

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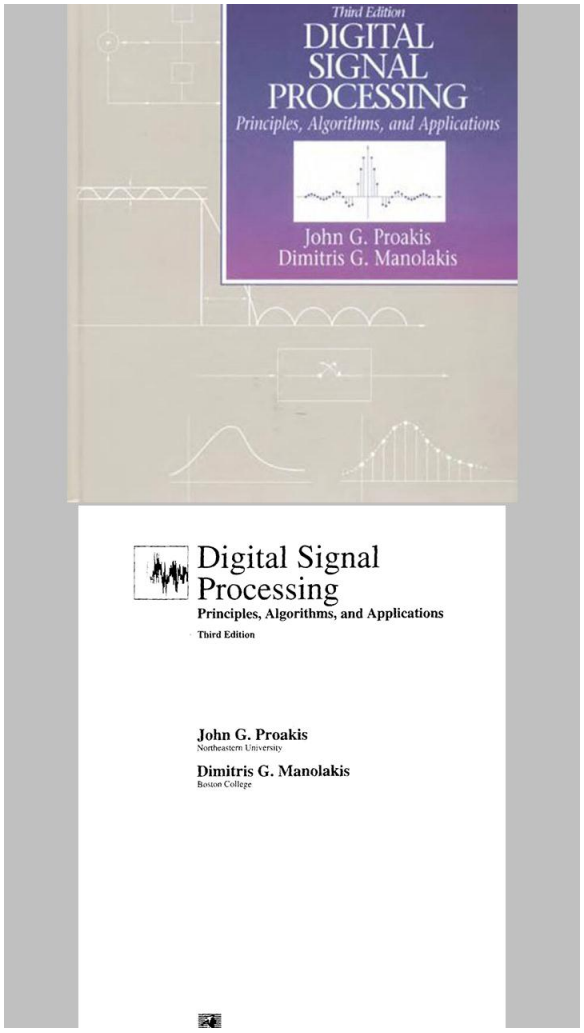
Third Edition
DIGITAL SIGNAL PROCESSING
Principles, Algorithms, and Applications
John G. Proakis
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Boston College

Hello Windows
Drawing Shapes
Types of Pens
Types of Brushes
    Code and Resources
Freehand Drawing, the Paintbrush Style
    Capturing the Mouse
Device Context, a Closer Look
Displaying a Bitmap
Animation at Work
    WM_CREATE and *OnCreate( )*
    WM_TIMER and *OnTimer( )*
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Summary
Exercise

19. Interaction With Hardware

Hardware Interaction
Hardware Interaction, DOS Perspective
Hardware Interaction, Windows Perspectiv
Communication with Storage Devices
    The *ReadSector( )* Function
Accessing Other Storage Devices
Communication with Keyboard
    Dynamic Linking
    Windows Hooks

JAVA code for App

MainActivity.java

```
package nextappsbd.engineeringbooksolution;


import android.content.Intent;
import android.net.Uri;
import android.os.Bundle;
import android.support.v7.app.AppCompatActivity;
import android.view.View;
import android.widget.Button;


public class MainActivity extends AppCompatActivity {
    Button btn;


    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
```

```
 btn = (Button) findViewById(R.id.button);
      btn.setOnClickListener(new View.OnClickListener() {
         @Override
         public void onClick(View v) {
            Intent browserIntent =
                  new Intent(Intent.ACTION_VIEW,
Uri.parse("https://drive.google.com/file/d/0B5mYKeNcVj2vSUc2Y2NSbW5tUU0/view?usp=sharing"));
            startActivity(browserIntent);
         }
      });
   }
}
```

Content.java

```
package nextappsbd.engineeringbooksolutation;


import android.content.Intent;
import android.net.Uri;
import android.os.Bundle;
```

```
import android.support.v7.app.AppCompatActivity;

import android.view.View;

import android.widget.Button;


public class Content extends AppCompatActivity {

   Button
btn1,btn2,btn3,btn4,btn5,btn6,btn7,btn8,btn9,btn10,btn11,btn12,btn13,btn14,btn15,btn16
,btn17,btn18,btn19,btn20;

  @Override

   protected void onCreate(Bundle savedInstanceState) {

      super.onCreate(savedInstanceState);

      setContentView(R.layout.activity_content);

 btn1 = (Button) findViewById(R.id.button1);

      btn1.setOnClickListener(new View.OnClickListener() {

         @Override

         public void onClick(View v) {

            Intent browserIntent =

                  new Intent(Intent.ACTION_VIEW,
Uri.parse("https://drive.google.com/file/d/0B5mYKeNcVj2vbHIxUDk5SEx0dlE/view?usp
=sharing"));

            startActivity(browserIntent);

         }

      });
```

```
btn2 = (Button) findViewById(R.id.button2);
    btn2.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View v) {
        Intent browserIntent =
            new Intent(Intent.ACTION_VIEW,
Uri.parse("https://drive.google.com/file/d/0B5mYKeNcVj2vemttLTltajFZZkU/view?usp=sharing"));
        startActivity(browserIntent);
      }
    });

    btn3 = (Button) findViewById(R.id.button3);
    btn3.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View v) {
        Intent browserIntent =
            new Intent(Intent.ACTION_VIEW,
Uri.parse("https://drive.google.com/file/d/0B5mYKeNcVj2vNHBpM0R6bjhEcEU/view?usp=sharing"));
        startActivity(browserIntent);
      }
    });
```

```
 btn4 = (Button) findViewById(R.id.button4);

      btn4.setOnClickListener(new View.OnClickListener() {

         @Override

         public void onClick(View v) {

            Intent browserIntent =

                  new Intent(Intent.ACTION_VIEW,
Uri.parse("https://drive.google.com/file/d/0B5mYKeNcVj2vU1Iwd0YzdzhJVE0/view?usp
=sharing"));

            startActivity(browserIntent);

         }

      });


      btn5 = (Button) findViewById(R.id.button5);

      btn5.setOnClickListener(new View.OnClickListener() {

         @Override

         public void onClick(View v) {

            Intent browserIntent =

                  new Intent(Intent.ACTION_VIEW,
Uri.parse("https://drive.google.com/file/d/0B5mYKeNcVj2vUW90ZkxHMG54RnM/view?
usp=sharing"));

            startActivity(browserIntent);

         }

      });
```

```
  btn6 = (Button) findViewById(R.id.button6);
      btn6.setOnClickListener(new View.OnClickListener() {
         @Override
         public void onClick(View v) {
            Intent browserIntent =
                  new Intent(Intent.ACTION_VIEW,
Uri.parse("https://drive.google.com/file/d/0B5mYKeNcVj2vZERkeUs3c2tSclE/view?usp=
sharing"));
            startActivity(browserIntent);
         }
      });


      btn7 = (Button) findViewById(R.id.button7);
      btn7.setOnClickListener(new View.OnClickListener() {
         @Override
         public void onClick(View v) {
            Intent browserIntent =
                  new Intent(Intent.ACTION_VIEW,
Uri.parse("https://drive.google.com/file/d/0B5mYKeNcVj2vRUV0amdzY2w1eFk/view?us
p=sharing"));
            startActivity(browserIntent);
         }
      });
```

```
   btn8 = (Button) findViewById(R.id.button8);
      btn8.setOnClickListener(new View.OnClickListener() {
         @Override
         public void onClick(View v) {
            Intent browserIntent =
                  new Intent(Intent.ACTION_VIEW,
Uri.parse("https://drive.google.com/file/d/0B5mYKeNcVj2vaTY3VW4tUFk5WWs/view?usp=sharing"));
            startActivity(browserIntent);
         }
      });


      btn9 = (Button) findViewById(R.id.button9);
      btn9.setOnClickListener(new View.OnClickListener() {
         @Override
         public void onClick(View v) {
            Intent browserIntent =
                  new Intent(Intent.ACTION_VIEW,
Uri.parse("https://drive.google.com/file/d/0B5mYKeNcVj2veTRid09JVVA2RFk/view?usp=sharing"));
            startActivity(browserIntent);
         }
      });
```

```
  btn10 = (Button) findViewById(R.id.button10);
      btn10.setOnClickListener(new View.OnClickListener() {
         @Override
         public void onClick(View v) {
            Intent browserIntent =
                  new Intent(Intent.ACTION_VIEW,
Uri.parse("https://drive.google.com/file/d/0B5mYKeNcVj2vYnBwV3Q2VlRzRzg/view?usp
=sharing"));
            startActivity(browserIntent);
         }
      });


      btn11 = (Button) findViewById(R.id.button11);
      btn11.setOnClickListener(new View.OnClickListener() {
         @Override
         public void onClick(View v) {
            Intent browserIntent =
                  new Intent(Intent.ACTION_VIEW,
Uri.parse("https://drive.google.com/file/d/0B5mYKeNcVj2vOHpyMHJTVTdCVkU/view?us
p=sharing"));
            startActivity(browserIntent);
         }
      });
```

```
    btn12 = (Button) findViewById(R.id.button12);
    btn12.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View v) {
        Intent browserIntent =
            new Intent(Intent.ACTION_VIEW,
Uri.parse("https://drive.google.com/file/d/0B5mYKeNcVj2vSV95THBVYmRPaDA/view?usp=sharing"));
        startActivity(browserIntent);
      }
    });
 btn13 = (Button) findViewById(R.id.button13);
    btn13.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View v) {
        Intent browserIntent =
            new Intent(Intent.ACTION_VIEW,
Uri.parse("https://drive.google.com/file/d/0B5mYKeNcVj2vYkRIYlJ3WS1nV3M/view?usp=sharing"));
        startActivity(browserIntent);
      }
    });
```

```
    btn14 = (Button) findViewById(R.id.button14);
    btn14.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View v) {
        Intent browserIntent =
            new Intent(Intent.ACTION_VIEW,
Uri.parse("https://drive.google.com/file/d/0B5mYKeNcVj2vZXpGaExRWmd4Ukk/view?usp=sharing"));
        startActivity(browserIntent);
      }
    });
 btn15 = (Button) findViewById(R.id.button15);
    btn15.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View v) {
        Intent browserIntent =
            new Intent(Intent.ACTION_VIEW,
Uri.parse("https://drive.google.com/file/d/0B5mYKeNcVj2vVGxpbEVhNC1SbTA/view?usp=sharing"));
        startActivity(browserIntent);
      }
    });
```

```
    btn16 = (Button) findViewById(R.id.button16);
    btn16.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View v) {
        Intent browserIntent =
            new Intent(Intent.ACTION_VIEW,
Uri.parse("https://drive.google.com/file/d/0B5mYKeNcVj2vZHdqQnozd0czNEE/view?usp
=sharing"));
        startActivity(browserIntent);
      }
    });
btn17 = (Button) findViewById(R.id.button17);
    btn17.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View v) {
        Intent browserIntent =
            new Intent(Intent.ACTION_VIEW,
Uri.parse("https://drive.google.com/file/d/0B5mYKeNcVj2vQUI0VjAxQ25jVmM/view?usp
=sharing"));
        startActivity(browserIntent);
      }
    });
```

```
btn18 = (Button) findViewById(R.id.button18);
    btn18.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View v) {
        Intent browserIntent =
            new Intent(Intent.ACTION_VIEW,
Uri.parse("https://drive.google.com/file/d/0B5mYKeNcVj2vcGFHT0VsRmI3S1U/view?usp=sharing"));
        startActivity(browserIntent);
      }
    });

    btn19 = (Button) findViewById(R.id.button19);
    btn19.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View v) {
        Intent browserIntent =
            new Intent(Intent.ACTION_VIEW,
Uri.parse("https://drive.google.com/file/d/0B5mYKeNcVj2vOHRILVBIRmpSUkU/view?usp=sharing"));
        startActivity(browserIntent);
      }
    });
```

```
    btn20 = (Button) findViewById(R.id.button20);
    btn20.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View v) {
        Intent browserIntent =
            new Intent(Intent.ACTION_VIEW,
Uri.parse("https://drive.google.com/file/d/0B5mYKeNcVj2vbDlneUlsemV3RlU/view?usp
=sharing"));
        startActivity(browserIntent);
      }
    });
  }
}
```

XML code for app design

activity-main.xml

```
<?xml version="1.0" encoding="utf-8"?>

<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"

   xmlns:tools="http://schemas.android.com/tools" android:layout_width="match_parent"

   android:layout_height="match_parent"
android:paddingLeft="@dimen/activity_horizontal_margin"

   android:paddingRight="@dimen/activity_horizontal_margin"

   android:paddingTop="@dimen/activity_vertical_margin"

   android:paddingBottom="@dimen/activity_vertical_margin"
tools:context=".MainActivity">


   <ImageView

      android:layout_width="wrap_content"

      android:layout_height="wrap_content"

      android:id="@+id/imageView"

      android:src="@drawable/unnamed"

      android:layout_marginBottom="104dp"

      android:layout_alignParentBottom="true"

      android:layout_alignParentLeft="true"

      android:layout_alignParentStart="true" />
```

```
<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="??????"
    android:id="@+id/button"
    android:layout_alignParentBottom="true"
    android:layout_marginBottom="42dp"
    android:layout_alignRight="@+id/imageView"
    android:layout_alignEnd="@+id/imageView"
    android:layout_alignParentLeft="true"
    android:layout_alignParentStart="true" />


  <TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:textAppearance="?android:attr/textAppearanceMedium"
    android:text="DEVELOPED BY : "
    android:id="@+id/textView"
    android:layout_alignParentBottom="true"
    android:layout_centerHorizontal="true" />
</RelativeLayout>
```

activity-content.xml

```
<ScrollView
   android:layout_width="fill_parent"
   android:layout_height="fill_parent"
   xmlns:ads="http://schemas.android.com/apk/res-auto"
   android:id="@+id/scrollView"
   xmlns:android="http://schemas.android.com/apk/res/android">

   <RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
      xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
      android:layout_height="match_parent"
      android:orientation="vertical">

  <Button
        android:layout_width="wrap_content"
        android:layout_height="match_parent"
        android:text="Let Us C"
        android:id="@+id/button1"
```

```
    android:textSize="30sp"
    android:layout_alignParentLeft="true"
    android:layout_alignParentStart="true"
    android:layout_alignParentRight="true"
    android:layout_alignParentEnd="true"/>

  <Button
    android:layout_width="wrap_content"
    android:layout_height="match_parent"
    android:text="Fundamental of Electric Circuits"
    android:textSize="30sp"
    android:id="@+id/button2"
    android:layout_marginTop="10dp"
    android:layout_below="@+id/button1"
    android:layout_alignParentRight="true"
    android:layout_alignParentEnd="true"
    android:layout_alignParentLeft="true"
    android:layout_alignParentStart="true" />
```

```
<Button
    android:layout_width="wrap_content"
    android:layout_height="match_parent"
    android:text="C++ The Complete Reference"
    android:textSize="30sp"
    android:id="@+id/button3"
    android:layout_marginTop="10dp"
    android:layout_below="@+id/button2"
    android:layout_alignParentRight="true"
    android:layout_alignParentEnd="true"
    android:layout_alignParentLeft="true"
    android:layout_alignParentStart="true"/>
  <Button
    android:layout_width="wrap_content"
    android:layout_height="match_parent"
    android:text="CDMA RF System Engineering"
    android:textSize="30sp"
    android:id="@+id/button4"
    android:layout_marginTop="10dp"
    android:layout_below="@+id/button3"
    android:layout_alignParentRight="true"
```

```
    android:layout_alignParentEnd="true"
    android:layout_alignParentLeft="true"
    android:layout_alignParentStart="true"/>
  <Button
    android:layout_width="wrap_content"
    android:layout_height="match_parent"
    android:text="Control Systems Engineering"
    android:textSize="30sp"
    android:id="@+id/button5"
    android:layout_marginTop="10dp"
    android:layout_below="@+id/button4"
    android:layout_alignParentRight="true"
    android:layout_alignParentEnd="true"
    android:layout_alignParentLeft="true"
    android:layout_alignParentStart="true"/>
  <Button
    android:layout_width="wrap_content"
    android:layout_height="match_parent"
    android:text="Computer Networks"
    android:textSize="30sp"
    android:id="@+id/button6"
    android:layout_marginTop="10dp"
```

```
        android:layout_below="@+id/button5"
         android:layout_alignParentRight="true"
         android:layout_alignParentEnd="true"
         android:layout_alignParentLeft="true"
         android:layout_alignParentStart="true"/>


      <Button
         android:layout_width="wrap_content"
         android:layout_height="match_parent"
         android:text="Digital Design"
         android:textSize="30sp"
         android:id="@+id/button7"
         android:layout_marginTop="10dp"
         android:layout_below="@+id/button6"
         android:layout_alignParentRight="true"
         android:layout_alignParentEnd="true"
         android:layout_alignParentLeft="true"
         android:layout_alignParentStart="true"/>
    <Button
         android:layout_width="wrap_content"
         android:layout_height="match_parent"
         android:text="Digital Signal Processing "
```

```
    android:textSize="30sp"
    android:id="@+id/button8"
    android:layout_marginTop="10dp"
    android:layout_below="@+id/button7"
    android:layout_alignParentRight="true"
    android:layout_alignParentEnd="true"
    android:layout_alignParentLeft="true"
    android:layout_alignParentStart="true"/>

  <Button
    android:layout_width="wrap_content"
    android:layout_height="match_parent"
    android:text="IP Telephony "
    android:textSize="30sp"
    android:id="@+id/button9"
    android:layout_marginTop="10dp"
    android:layout_below="@+id/button8"
    android:layout_alignParentRight="true"
    android:layout_alignParentEnd="true"
    android:layout_alignParentLeft="true"
    android:layout_alignParentStart="true"/>
```

```
<Button
   android:layout_width="wrap_content"
   android:layout_height="match_parent"
   android:text="BANGLADESH NATIONAL FREQUENCY ALLOCATION PLAN "
   android:textSize="30sp"
   android:id="@+id/button10"
   android:layout_marginTop="10dp"
   android:layout_below="@+id/button9"
   android:layout_alignParentRight="true"
   android:layout_alignParentEnd="true"
   android:layout_alignParentLeft="true"
   android:layout_alignParentStart="true"/>

<Button
   android:layout_width="wrap_content"
   android:layout_height="match_parent"
   android:text="Signals and Systems"
   android:textSize="30sp"
   android:id="@+id/button11"
   android:layout_marginTop="10dp"
   android:layout_below="@+id/button10"
```

```
    android:layout_alignParentRight="true"
    android:layout_alignParentEnd="true"
    android:layout_alignParentLeft="true"
    android:layout_alignParentStart="true"/>

<Button
    android:layout_width="wrap_content"
    android:layout_height="match_parent"
    android:text="The Intel Microprocessor"
    android:textSize="30sp"
    android:id="@+id/button12"
    android:layout_marginTop="10dp"
    android:layout_below="@+id/button11"
    android:layout_alignParentRight="true"
    android:layout_alignParentEnd="true"
    android:layout_alignParentLeft="true"
    android:layout_alignParentStart="true"/>

<Button
    android:layout_width="wrap_content"
    android:layout_height="match_parent"
    android:text="Discrete Mathematics"
```

```
    android:textSize="30sp"
    android:id="@+id/button13"
    android:layout_marginTop="10dp"
    android:layout_below="@+id/button12"
    android:layout_alignParentRight="true"
    android:layout_alignParentEnd="true"
    android:layout_alignParentLeft="true"
    android:layout_alignParentStart="true"/>

  <Button
    android:layout_width="wrap_content"
    android:layout_height="match_parent"
    android:text="Basic Electronics"
    android:textSize="30sp"
    android:id="@+id/button14"
    android:layout_marginTop="10dp"
    android:layout_below="@+id/button13"
    android:layout_alignParentRight="true"
    android:layout_alignParentEnd="true"
    android:layout_alignParentLeft="true"
    android:layout_alignParentStart="true"/>
```

```
<Button
android:layout_width="wrap_content"
android:layout_height="match_parent"
android:text="WIRELESS COMMUNICATIONS"
android:textSize="30sp"
android:id="@+id/button15"
android:layout_marginTop="10dp"
android:layout_below="@+id/button14"
android:layout_alignParentRight="true"
android:layout_alignParentEnd="true"
android:layout_alignParentLeft="true"
android:layout_alignParentStart="true"/>

<Button
   android:layout_width="wrap_content"
   android:layout_height="match_parent"
   android:text="Digital Logic Circuit Analysis and Design"
   android:textSize="30sp"
   android:id="@+id/button16"
   android:layout_marginTop="10dp"
   android:layout_below="@+id/button15"
```

```
    android:layout_alignParentRight="true"
    android:layout_alignParentEnd="true"
    android:layout_alignParentLeft="true"
    android:layout_alignParentStart="true"/>

<Button
    android:layout_width="wrap_content"
    android:layout_height="match_parent"
    android:text="Enginnering Electromagnetics"
    android:textSize="30sp"
    android:id="@+id/button17"
    android:layout_marginTop="10dp"
    android:layout_below="@+id/button16"
    android:layout_alignParentRight="true"
    android:layout_alignParentEnd="true"
    android:layout_alignParentLeft="true"
    android:layout_alignParentStart="true"/>

<Button
    android:layout_width="wrap_content"
    android:layout_height="match_parent"
    android:text="Electronic Devices and Circuit Theory"
```

```
    android:textSize="30sp"
    android:id="@+id/button18"
    android:layout_marginTop="10dp"
    android:layout_below="@+id/button17"
    android:layout_alignParentRight="true"
    android:layout_alignParentEnd="true"
    android:layout_alignParentLeft="true"
    android:layout_alignParentStart="true"/>

  <Button
    android:layout_width="wrap_content"
    android:layout_height="match_parent"
    android:text="Data Structure and Algorithms"
    android:textSize="30sp"
    android:id="@+id/button19"
    android:layout_marginTop="10dp"
    android:layout_below="@+id/button18"
    android:layout_alignParentRight="true"
    android:layout_alignParentEnd="true"
    android:layout_alignParentLeft="true"
    android:layout_alignParentStart="true"/>
```

```
    <Button
        android:layout_width="wrap_content"
        android:layout_height="match_parent"
        android:text="Computer Networks"
        android:textSize="30sp"
        android:id="@+id/button20"
        android:layout_marginTop="10dp"
        android:layout_below="@+id/button19"
        android:layout_alignParentRight="true"
        android:layout_alignParentEnd="true"
        android:layout_alignParentLeft="true"
        android:layout_alignParentStart="true"/>



  </RelativeLayout>
</ScrollView>
```

Manifest code for app permission

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
   package="nextappsbd.engineeringbooksolution" >
 <application
      android:allowBackup="true"
      android:icon="@mipmap/ic_launcher"
      android:label="@string/app_name"
      android:supportsRtl="true"
      android:theme="@style/AppTheme" >
      <activity android:name=".MainActivity" >
         <intent-filter>
            <action android:name="android.intent.action.MAIN" />
 <category android:name="android.intent.category.LAUNCHER" />
         </intent-filter>
      </activity>
   </application>
   <uses-permission
android:name="android.permission.ACCESS_NETWORK_STATE"></uses-permission>
   <uses-permission android:name="android.permission.INTERNET"></uses-permission>
</manifest>
```

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