

FR. CONCEICAO RODRIGUES COLLEGE OF ENGINEERING
Department of Computer Engineering

Academic Term : July-Nov 2020

Class : B.E Computer Sem -VII

Subject : Mobile Communication And Computing

Practical No:	8
Title:	Android Application to draw Basic Graphical Primitives
Date of Performance:	
Date of Submission:	
Roll No:	
Name of the Student:	

Evaluation:

Sr. No	Rubric	Grade
1	On time submission Or completion (2)	
2	Preparedness(2)	
3	Skill (4)	
4	Output (2)	

Signature of the Teacher :

PRACTICAL - 8

Title : To develop a Simple Android Application that draws basic Graphical Primitives on the screen.

Objective : To study basic components and features of Android.

References : W. Frank, Robi sen, “Android in action”, Dreamtech Press.

Prerequisite : knowledge of Java Programming.

Creating a New project:

- Open Android Studio and then click on **File -> New -> New project**
- Then type the Application name as “**ex.no.4**” and click **Next**.
- Then select the **Minimum SDK** as shown below and click **Next**.
- Then select the **Empty Activity** and click **Next**.
- Finally click **Finish**.
- It will take some time to build and load the project.
- After completion it will look as given below.

Designing layout for the Android Application:

- Click on **app -> res -> layout -> activity_main.xml**.
- Now click on **Text** as shown below.
- Then delete the code which is there and type the code as given below.

Code for Activity_main.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent">

    <ImageView
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:id="@+id/imageView" />
</RelativeLayout>
```

Now click on **Design** and your application will look as given below.

So now the designing part is completed.

Java Coding for the Android Application:

- Click on **app -> java -> com.example.exno4 -> MainActivity**.
- Then delete the code which is there and type the code as given below.

Code for MainActivity.java:

```
package com.example.exno4;

import android.app.Activity;
import android.graphics.Bitmap;
import android.graphics.Canvas;
import android.graphics.Color;
import android.graphics.Paint;
import android.graphics.drawable.BitmapDrawable;
import android.os.Bundle;
import android.widget.ImageView;

public class MainActivity extends Activity
{
    @Override
    public void onCreate(Bundle savedInstanceState)
    {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        //Creating a Bitmap
        Bitmap bg = Bitmap.createBitmap(720, 1280, Bitmap.Config.ARGB_8888);

        //Setting the Bitmap as background for the ImageView
        ImageView i = (ImageView) findViewById(R.id.imageView);
        i.setBackgroundDrawable(new BitmapDrawable(bg));

        //Creating the Canvas Object
        Canvas canvas = new Canvas(bg);

        //Creating the Paint Object and set its color & TextSize
        Paint paint = new Paint();
        paint.setColor(Color.BLUE);
        paint.setTextSize(50);

        //To draw a Rectangle
        canvas.drawText("Rectangle", 420, 150, paint);
    }
}
```

```

        canvas.drawRect(400, 200, 650, 700, paint);

//To draw a Circle
canvas.drawText("Circle", 120, 150, paint);
canvas.drawCircle(200, 350, 150, paint);

//To draw a Square
canvas.drawText("Square", 120, 800, paint);
canvas.drawRect(50, 850, 350, 1150, paint);

//To draw a Line
canvas.drawText("Line", 480, 800, paint);
canvas.drawLine(520, 850, 520, 1150, paint);
    }
}

```

So now the Coding part is also completed.
Now run the application to see the output.

