



Vishwakarma Institute of Technology
Department of Engineering Sciences and Humanities (DESH)

Name of the student: **Krishna Sunil Sadar**

Division: **O**

Batch: 2

PRN:12310466

Roll Number: 42

Subject: Mobile Application Development

Assignment 1

Problem Statement: Write an application that draws basic graphical primitives on the screen.

Program Code:

Activity.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"
    tools:context=".MainActivity">

</RelativeLayout>
```

MainActivity.java

```
package com.example.mad_ha_4;

import android.content.Context;
import android.graphics.Bitmap;
import android.graphics.Canvas;
import android.graphics.Color;
import android.graphics.Paint;
import android.os.Bundle;
import android.view.View;
import androidx.appcompat.app.AppCompatActivity;
```

```
public class MainActivity extends AppCompatActivity {

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        DrawingView drawingView = new DrawingView(this);

        setContentView(drawingView);
    }

    private static class DrawingView extends View {

        private Bitmap bitmap;

        private Canvas canvas;

        private Paint paint;

        public DrawingView(Context context) {

            super(context);

            paint = new Paint();

            paint.setColor(Color.BLACK);

            paint.setAntiAlias(true);

            paint.setStrokeWidth(5f);

        }

        @Override

        protected void onSizeChanged(int w, int h, int oldw, int oldh) {

            super.onSizeChanged(w, h, oldw, oldh);

            bitmap = Bitmap.createBitmap(w, h, Bitmap.Config.ARGB_8888);

            canvas = new Canvas(bitmap);

        }

        @Override

        protected void onDraw(Canvas canvas) {

            super.onDraw(canvas);

            canvas.drawBitmap(bitmap, 0f, 0f, null);

            // Draw primitives

            drawLine(50f, 50f, 250f, 250f);

            drawCircle(400f, 200f, 100f);
```

```
drawRectangle(100f, 400f, 300f, 600f);  
  
}  
  
private void drawLine(float x1, float y1, float x2, float y2) {  
    canvas.drawLine(x1, y1, x2, y2, paint);  
    invalidate();  
}  
  
private void drawCircle(float cx, float cy, float radius) {  
    canvas.drawCircle(cx, cy, radius, paint);  
    invalidate();  
}  
  
private void drawRectangle(float left, float top, float right, float bottom) {  
    canvas.drawRect(left, top, right, bottom, paint);  
    invalidate();  
}  
}  
}
```

Output:

