

Develop an android mobile application to draw basic graphical primitives on the screen

MainActivity.java

```
\
package com.indran.mcarit.graphicalobjects;

import android.graphics.Bitmap;
import android.graphics.Canvas;
import android.graphics.Color;
import android.graphics.Paint;
import android.graphics.PorterDuff;
import android.graphics.drawable.BitmapDrawable;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.ImageView;

public class MainActivity extends AppCompatActivity {
    ImageView img;
    Bitmap bg;
    Canvas canvas;
    Paint paint;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        img = (ImageView) findViewById(R.id.img);
        bg = Bitmap.createBitmap(720, 1280, Bitmap.Config.ARGB_8888);
        img.setBackgroundDrawable(new BitmapDrawable(bg));

    }
    private void onStartNow () {
    try {

        canvas.drawColor(0, PorterDuff.Mode.CLEAR);
    } catch (Exception e){}
        canvas = new Canvas(bg);
        paint = new Paint();
        paint.setColor(Color.GREEN);
        paint.setTextSize(50);
    }

    public void Line(View view) {
        onStartNow();
        canvas.drawText("Line", 120, 150, paint);
        canvas.drawLine(50, 250, 520, 1150, paint);
        img.invalidate();
    }
}
```

```

}

public void Square(View view) {
    onStartNow();
    canvas.drawText("Square", 120, 150, paint);
    canvas.drawRect(100, 200, 600, 700, paint);
    img.invalidate();
}

public void Circle(View view) {
    onStartNow();
    canvas.drawText("Circle", 120, 150, paint);
    canvas.drawCircle(300, 600, 300, paint);
    img.invalidate();
}

public void Rectangle(View view) {
    onStartNow();
    canvas.drawText("Rectangle", 120, 150, paint);
    canvas.drawRect(50, 200, 600, 700, paint);
    img.invalidate();
}
}

```

activity_mian.xml

```

<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:padding="10dp"
    tools:context="com.indran.mcarit.graphicalobjects.MainActivity">

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_alignParentLeft="true"
        android:layout_alignParentStart="true"
        android:layout_alignParentTop="true"
        android:orientation="horizontal"
        android:paddingBottom="10dp"

```

```
android:id="@+id/r1">
```

```
<Button  
    android:id="@+id/button1"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="Rectangle"  
    android:onClick="Rectangle"/>
```

```
<Button  
    android:id="@+id/button2"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="Circle"  
    android:onClick="Circle"/>
```

```
<Button  
    android:id="@+id/button3"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="Square"  
    android:onClick="Square"/>
```

```
<Button  
    android:id="@+id/button4"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="Line"  
    android:onClick="Line"/>
```

```
</LinearLayout>
```

```
<ImageView  
    android:id="@+id/img"  
    android:layout_width="match_parent"  
    android:layout_height="match_parent"  
    android:layout_below="@+id/r1"/>
```

```
</RelativeLayout>
```

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```

```
import android.graphics.*;  
import android.graphics.drawable.BitmapDrawable;
```

```
import android.view.View;
import android.widget.ImageView;
```

```
public class MainActivity extends AppCompatActivity {
    ImageView img;
    Bitmap bg;
    Canvas canvas;
    Paint paint;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        img = (ImageView) findViewById(R.id.img);
        bg = Bitmap.createBitmap(720, 1280, Bitmap.Config.ARGB_8888);
        img.setBackgroundDrawable(new BitmapDrawable(bg));
    }
```

```
    private void onStartNow () {
    try {
```

```
        canvas.drawColor(0, PorterDuff.Mode.CLEAR);
    } catch (Exception e){}
        canvas = new Canvas(bg);
        paint = new Paint();
        paint.setColor(Color.GREEN);
        paint.setTextSize(50);
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    public void Line(View view) {
        onStartNow();
        canvas.drawText("Line", 120, 150, paint);
        canvas.drawLine(50, 250, 520, 1150, paint);
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    }
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```
    public void Square(View view) {
        onStartNow();
        canvas.drawText("Square", 120, 150, paint);
        canvas.drawRect(100, 200, 600, 700, paint);
        img.invalidate();
    }
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```
    public void Circle(View view) {
        onStartNow();
        canvas.drawText("Circle", 120, 150, paint);
        canvas.drawCircle(300, 600, 300, paint);
    }
```

```
img.invalidate();
```

```
}
```

```
public void Rectangle(View view) {  
    onStartNow();  
    canvas.drawText("Rectangle", 120, 150, paint);  
    canvas.drawRect(50, 200, 600, 700, paint);  
    img.invalidate();  
}  
}
```

activity_mian.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" style="background-color: #f0f0f0;"  
    android:layoutWidth="match_parent" android:layoutHeight="match_parent" android:id="@+id/r1">
```

```
<LinearLayout android:id="@+id/r1">
```

```
<Button  
    android:text="Rectangle"  
    android:onClick="Rectangle"/>
```

```
<Button  
    android:text="Circle"  
    android:onClick="Circle"/>
```

```
<Button  
    android:text="Square"  
    android:onClick="Square"/>
```

```
<Button  
    android:text="Line"  
    android:onClick="Line"/>
```

```
</LinearLayout>  
<ImageView  
    android:id="@+id/img" />
```

```
</RelativeLayout>
```

Graphical Objects

RECTANGLE

CIRCLE

SQUARE

LINE

Line

