

**Ex. No. : 03**

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**R**

## **Android Graphical primitives**

### **Aim**

Develop an android application to draw the circle, ellipse, rectangle and some text using Android Graphical primitives

### ***Procedure:***

**Step 1 :** File -> NewProject

Provide the application name and Click "Next"

**Step 2 :** Select the target android devices

Select the minimum SDK to run the application. Click "Next". **Step 3 :** Choose the activity for the application (By default choose "Blank Activity"). Click "Next".

**Step 4 :** Enter activity name and click "Finish".

**Step 5 :** Edit the program.

**Step 6 :** Run the application, 2-ways to run the application.

1. Running through emulator
2. Running through mobile device

### ***AndroidManifest.xml***

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.ex3">

    <application
        android:allowBackup="true"
        android:label="DrawingApp"
        android:icon="@mipmap/ic_launcher"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportRtl="true"
        android:theme="@style/Theme.Ex3">
        <activity android:name=".MainActivity"
            android:exported="true">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>

</manifest>
```

### ***Activity\_main.xml***

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

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

    android:orientation="vertical"

    android:layout_width="match_parent"
    android:layout_height="match_parent">
```

```
        android:layout_height="match_parent">
```

```
<com.example.ex3.Custom  
DrawingView
```

```
        android:id="@+id/customView"
```

```
        android:layout_width="match_parent"
```

```
        android:layout_height="match_parent"/>  
</LinearLayout>
```

### ***MainActivity.kt***

```
package com.example.ex3
```

```
import android.os.Bundle  
import  
androidx.appcompat.app.AppCompatActivity
```

```
class MainActivity :  
AppCompatActivity() {
```

```
    override fun  
    onCreate(savedInstanceState: Bundle?) {
```

```
super.onCreate(savedInstanceState)
```

```
setContentView(R.layout.a  
ctivity_main)  
}  
}
```

### **CustomDrawingView**

```
package  
com.example.ex3
```

```
import  
android.content.Context  
import  
android.graphics.Canvas  
import  
android.graphics.Color  
import  
android.graphics.Paint  
import  
android.graphics.RectF  
import  
android.util.AttributeSet  
import  
android.view.View
```

```
class  
CustomDrawingView(co  
ntext: Context, attrs:
```

```

AttributeSet?) :
View(context, attrs) {

    private val paint =
    Paint()

    override fun
    onDraw(canvas: Canvas)
    {

        super.onDraw(canvas)

        // Smooth edges
        paint.isAntiAlias =
        true

        // 1. Draw Circle
        paint.color =
        Color.RED
        paint.style =
        Paint.Style.FILL

        canvas.drawCircle(300f,
        300f, 100f, paint)

        // 2. Draw Ellipse
        paint.color =
        Color.BLUE
        val oval =
        RectF(500f, 100f, 800f,

```

300f)

```
canvas.drawOval(oval,  
paint)
```

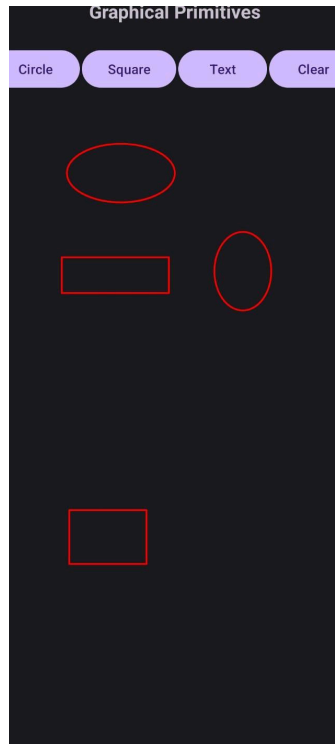
```
// 3. Draw Rectangle  
paint.color =  
Color.GREEN
```

```
canvas.drawRect(100f,  
500f, 500f, 700f, paint)
```

```
// 4. Draw Text  
paint.color =  
Color.BLACK  
paint.textSize = 60f
```

```
canvas.drawText("Hello  
from Canvas!", 100f,  
850f, paint)  
}  
}
```

**Output :**



**Result:**

The Application was developed using Kotlin in Android Studio.