

Program 4. Develop a canvas to draw different shapes and to fill the shapes with different colors.

Main_activity.java

```
package com.example.shape;

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

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(new com.example.shape.CustomView(this));
    }
}
```

CustomView.java

```
package com.example.shape;

import android.content.Context;
import android.graphics.Canvas;
import android.graphics.Color;
import android.graphics.Paint;
import android.graphics.Rect;
import android.graphics.RectF;
import android.view.View;

class CustomView extends View {

    private Rect rectangle;
```

```

private Paint paint, p1;
public CustomView(Context context) {
    super(context);
    int x = 100;
    int y = 50;
    int width = 1000;
    int height = 500;
    // create a rectangle that we'll draw later
    rectangle = new Rect(x, y, width, height);
    // create the Paint and set its color
    paint = new Paint();
    paint.setColor(Color.YELLOW);
    p1 = new Paint();
    p1.setColor(Color.GREEN);
}
@Override
protected void onDraw(Canvas canvas) {
    canvas.drawColor(Color.WHITE);
    canvas.drawRect(rectangle, paint);
    canvas.drawCircle(550, 270, 150, p1);
    RectF oval = new RectF(300, 700, 800, (float) (520 + 520 / 1.5));
    canvas.drawArc(oval, 180, 180, false, p1);
}
}

```

Activity_main.xml

```

<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    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"
tools:context=".MainActivity">
<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Hello World!"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintLeft_toLeftOf="parent"
    app:layout_constraintRight_toRightOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

Output

