

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

Main activity.java

```
package com.example.smileyface;

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.smileyface.CustomView(this));
    }
}
```

activity_main.java

```
?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>
```

CUSTOMVIEW.JAVA

```
package com.example.smileyface;

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

public class CustomView extends View {

    private Rect rectangle;
    private Paint paint, p1;
}
```

```

public CustomView(Context context) {
    super(context);
    int x = 200;
    int y = 50;
    int width = 800;
    int height = 300;

    // 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.WHITE);

    p1 = new Paint();
    p1.setColor(Color.BLUE);
}

@Override
protected void onDraw(Canvas canvas) {
    canvas.drawColor(Color.YELLOW);
    canvas.drawRect(rectangle, paint);
}
}

```

OUTPUT:

