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

CODE :

XML

```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>
```

JAVA

```java
package com.example.shapes;

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.shapes.CustomView(this));

    }

}
```

CUSTOMVIEW

```java
package com.example.shapes;

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) {
```

```java
        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.BLACK);

        p1 = new Paint();

        p1.setColor(Color.GRAY);

    }

    @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);

    }

}
```

SCREENSHOT