**Experiment No. 7**

**MainActivity.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 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.Path;

import android.graphics.Rect;

import android.view.View;

import static android.graphics.Color.parseColor;

public class CustomView extends View {

private Rect rectangle;

private Paint paint;

public CustomView(Context context) {

super(context);

int x = 50;

int y = 50;

int sideLength = 200;

// create a rectangle that we'll draw later

rectangle = new Rect(x, y, sideLength, sideLength);

// create the Paint and set its color

paint = new Paint();

paint.setColor(Color.YELLOW);

}

public void drawTriangle(Canvas canvas, Paint paint, int x, int y, int width) {

int halfWidth = width / 2;

Path path = new Path();

path.moveTo(x, y - halfWidth); // Top

path.lineTo(x - halfWidth, y + halfWidth); // Bottom left

path.lineTo(x + halfWidth, y + halfWidth); // Bottom right

path.lineTo(x, y - halfWidth); // Back to Top

path.close();

canvas.drawPath(path, paint);

}

@Override

protected void onDraw(Canvas canvas) {

canvas.drawColor(Color.parseColor("#dcdcdc"));

canvas.drawRect(rectangle, paint);

canvas.drawRect(250,400,500,200,paint);

canvas.drawCircle(300,1100,100,paint);

drawTriangle(canvas, paint, 600, 600, 500);

}

}

**Activity\_main.xml**

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

<androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android" android:shape="rectangle"

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" />

<corners android:radius="20dp"/>

<padding android:left="10dp" android:right="10dp" android:top="10dp" android:bottom="10dp"/>

<solid android:color="#FFFFFF"/>

<stroke android:width="12dp" android:color="#000000"/>

</androidx.constraintlayout.widget.ConstraintLayout>

