Program 5. Create an application to show happy face smiley and sad face smiley to demonstrate button click events.

Main_activity.java

package com.mca.smiley_button;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;


```java
public class MainActivity extends AppCompatActivity {

Button button;


    @Override

    protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);

button = (Button) findViewById(R.id.button);

        button.setOnClickListener(new View.OnClickListener() {

            @Override

            public void onClick(View v) {

openNewActivity();

            }

        });

    }
```

```java
    public void openNewActivity(){

        Intent intent = new Intent(this,MainActivity2.class);
startActivity(intent);

    }


}
```

Main_activity2.java

```java
package com.mca.smiley_button;

 import android.content.Intent; import android.os.Bundle;

 import android.view.View; import android.widget.Button;


import com.mca.smiley_button.databinding.ActivityMain2Binding;

import androidx.appcompat.app.AppCompatActivity;

 import androidx.navigation.ui.AppBarConfiguration;


public class MainActivity2 extends AppCompatActivity {

 Button button1;


    @Override

    protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_sec);

button1 = (Button) findViewById(R.id.button1);

        button1.setOnClickListener(new View.OnClickListener() {

            @Override

            public void onClick(View v) {

                    openNewActivity();
```

```
        }
    });
  }
  public void openNewActivity(){
     Intent intent1 = new Intent(this,MainActivity.class);
startActivity(intent1);
  }


}
```

Activity_main.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="wrap_content"
android:layout_height="wrap_content"      android:orientation="vertical"
tools:context=".MainActivity">

    <com.mca.smiley_button_program_52.FaceView
android:layout_width="wrap_content"
android:layout_height="wrap_content" />

    <Button
        android:id="@+id/button"
        android:layout_width="match_parent"
android:layout_height="wrap_content"         android:text="---
> Sad Face" />

</RelativeLayout>
```

Activity_sec.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
android:layout_width="match_parent"
android:layout_height="match_parent">

    <com.mca.smiley_button_program_52.FaceView2
android:layout_width="wrap_content"
android:layout_height="wrap_content" />
    <Button
        android:id="@+id/button1"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:text="---> Happy Face" /> </RelativeLayout>
```

Faceview.java

```java
package com.mca.smiley_button;
 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;

public class FaceView extends View {

        private Paint paint,p2;
    public FaceView(Context context, AttributeSet attrs)
{           super(context);          paint = new Paint();
p2 = new Paint();        p2.setColor(Color.RED);
    }

    @Override
    protected void onDraw(Canvas canvas) {

        super.onDraw(canvas);

        super.onDraw(canvas);
int x = getWidth();
int y = getHeight();
int radius=500;
        paint.setStyle(Paint.Style.FILL);
paint.setColor(Color.WHITE);
        paint.setColor(Color.parseColor("#fcba03"));
canvas.drawCircle(x/2,y/3,radius,paint);
//1st eye of the smiley
float x2 = getWidth();
float y2 = getHeight();
int radius2=80;
        paint.setStyle(Paint.Style.FILL);
paint.setColor(Color.WHITE);
        paint.setColor(Color.parseColor("#1D2229"));
        canvas.drawCircle((float) (x2/3.5), (float) (y2/4),radius2,paint);
//2nd eye of smiley
int x3 = getWidth();
int y3 = getHeight();
//int radius3=50;
        paint.setStyle(Paint.Style.FILL);
paint.setColor(Color.WHITE);
        paint.setColor(Color.parseColor("#1D2229"));
        canvas.drawCircle((float) (x2/1.5), (float) (y2/4),radius2,paint);
//mouth
        RectF oval = new RectF(290, 700, 800,
1000);          canvas.drawArc(oval,0,-180,true,p2);
    }
}
```

Faceview2.java

```java
package com.mca.smiley_button;

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;

public class FaceView2 extends View {
private Paint paint,p2;

    public FaceView2(Context context, AttributeSet attrs)
{          super(context);          paint = new Paint();
p2 = new Paint();        p2.setColor(Color.GREEN);
/*super(context, attrs);
        Paint = new Paint();
Paint.setAntiAlias(true);*/
    }


    @Override
    protected void onDraw(Canvas canvas) {

super.onDraw(canvas);
int x = getWidth();
int y = getHeight();
int radius=500;
        paint.setStyle(Paint.Style.FILL);
paint.setColor(Color.WHITE);
        paint.setColor(Color.parseColor("#fcba03"));
canvas.drawCircle(x/2,y/3,radius,paint);
        //1st eye of the smiley
float x2 = getWidth();
float y2 = getHeight();
int radius2=80;
        paint.setStyle(Paint.Style.FILL);
paint.setColor(Color.WHITE);
        paint.setColor(Color.parseColor("#1D2229"));
canvas.drawCircle((float) (x2/3.5), (float)
                (y2/4),radius2,paint);
//2nd eye of smiley
int x3 = getWidth();
int y3 = getHeight();
//int radius3=50;
        paint.setStyle(Paint.Style.FILL);
paint.setColor(Color.WHITE);
        paint.setColor(Color.parseColor("#1D2229"));
canvas.drawCircle((float) (x2/1.5), (float)
                (y2/4),radius2,paint);
//mouth
        RectF oval = new RectF(200, 500, 850,
1000);          canvas.drawArc(oval,0,180,true,p2);
}
}
```