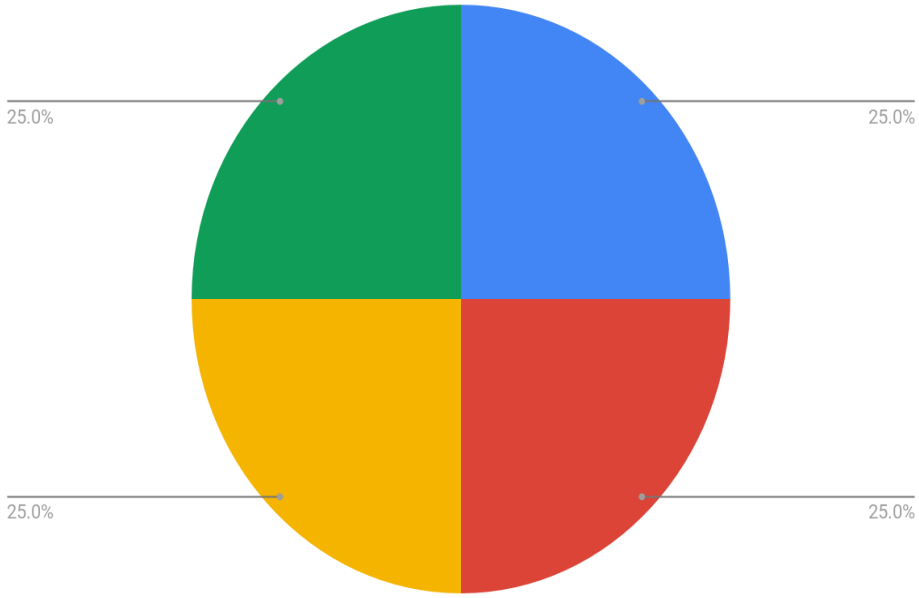
2. More advanced

2.1 Create a 4 color pie chart as shown below
2.2 Rotate the circle chart with speed = 10.



On Touch

```
public boolean onTouchEvent(MotionEvent event)
{
      float touchX = event.getX();
      float touchY = event.getY();
      switch (event.getAction() & MotionEvent.ACTION_MASK) {
                  case MotionEvent.ACTION_DOWN:

                  //Do something
                  //E.g., change X value
                  break;
        }
}
```

Solution

```
<?xml version="1.0" encoding="utf-8"?>
<AbsoluteLayout 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="com.example.vdo.week8_workshop.MainActivity">

   <com.example.vdo.week8_workshop.Week10_Fri
       android:id="@+id/myView"
       android:layout_width="wrap_content"
       android:layout_height="wrap_content" />

   <SeekBar
       android:id="@+id/seekBar"
       android:layout_width="match_parent"
       android:layout_height="wrap_content"
       android:layout_x="2dp"
       android:layout_y="427dp" />

   <TextView
       android:id="@+id/textView"
       android:layout_width="wrap_content"
       android:layout_height="wrap_content"
       android:layout_x="164dp"
       android:layout_y="472dp"
       android:text="TextView" />

</AbsoluteLayout>
```

```java
package com.example.vdo.week8_workshop;

import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.widget.SeekBar;
import android.widget.TextView;
import android.widget.Toast;

import org.w3c.dom.Text;

public class MainActivity extends AppCompatActivity {

    SeekBar sb;
    TextView tv;
    Week10_Fri myView;

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

        sb = (SeekBar)findViewById(R.id.seekBar);
        tv = (TextView)findViewById(R.id.textView);
        myView = (Week10_Fri)findViewById(R.id.myView);


        sb.setOnSeekBarChangeListener(new SeekBar.OnSeekBarChangeListener() {
            @Override
            public void onProgressChanged(SeekBar seekBar, int
             progress, boolean fromUser) {
                tv.setText("Data: " + progress);
                float x = progress * 3.6f;
                myView.rot = (int)x;
            }

            @Override
            public void onStartTrackingTouch(SeekBar seekBar) {
            }

            @Override
            public void onStopTrackingTouch(SeekBar seekBar) {
            }
        });
    }
}
```

```java
package com.example.vdo.week8_workshop;

import android.content.Context;
import android.graphics.Canvas;
import android.graphics.Color;
import android.graphics.Paint;
import android.os.Handler;
import android.support.annotation.Nullable;
import android.util.AttributeSet;
import android.view.View;

/**
* Created by vdo on 8/18/2017 AD.
*/

public class Week10_Fri extends View {

    Handler h;
    public Week10_Fri(Context context) {
        super(context);

    }

    public Week10_Fri(Context context, @Nullable AttributeSet attrs) {
        super(context, attrs);
        h = new Handler();
    }

    Runnable r = new Runnable() {
        @Override
        public void run() {
            invalidate();
        }
    };

    public float x = 0;
    public float rot = 0;
    @Override
    protected void onDraw(Canvas canvas) {
        super.onDraw(canvas);

        Paint p = new Paint();
        p.setColor(Color.RED);
        //canvas.drawRect(200+x,200,400+x,400,p);

        //canvas.save();
        //canvas.rotate(x,300,300);
```

```
        //canvas.scale(x,1,200,200);
        //canvas.drawRect(200,200,400,400,p);
        //canvas.restore();
        canvas.drawArc(300,300,700,700,270,x,true,p);
        p.setColor(Color.WHITE);
        canvas.drawCircle(500,500,100,p);

        //p.setStrokeWidth(20);
        //canvas.drawLine(500,500,700,700,p);

        //x+=0.2;
        x=rot;


        h.postDelayed(r,50);

    }
}
```