

№7-amaliyot ishi

Tashqi kutubxonalardan foydalanish

1. Ishdan maqsad

Tashqi kutubxonalardan foydalanish bilan ilovalarni yozishni o'rganish

2. Topshiriq

AChartEngine kutubxonalarni ulash bilan grafikni qurish

3. Amaliyot ishini bajarish bo'yicha ko'rsatmalar

1. **Graphics** loyihani yarating.
2. Kutubxonani ulash uchun uni ishlab chiquvchining saytidan ko'chirib olish, keyin uni oddiy yo'l ko'rsatkichdan sizning *Eclippedagi* sizning loyihangizdagi **libs** jildga o'tkazish kerak.

Endi `<activity android:name="org.achartengine.GraphicalActivity"/>` satrni **sizning loyihangizdagi** manifest faylidagi `<application>` bo'limiga qo'shish kerak. Kutubxona ulangan.

3. Endi **MainActivity.java** fayliga o'tamiz. Uchta massivni (**onCreate()** **usulda**) yarating va initsializatsiyalang. Birinchi massivda ranglar, ikkinchi massivda imzolar, uchinchi massivda qiymatlar bo'ladi.

```
int[] values = new int[] { 25,25,25,25 };
```

```
String[] bars = new String[] { "Bananas", "Kiwi", "Oranges", "Cream"};
```

```
int[] colors = new int[] { Color.YELLOW, Color.GREEN, Color.RED,
Color.WHITE };
```

4. **CategorySeries** ob'ektini yarating va unga imzolarli satrlar va qiymatlar massivlarini yuklang. Digrammalarni qurishda aynan bu ma'lumotlar ishlatiladi.

```
CategorySeries series = new CategorySeries("Pie Chart");
```

5. **DefaultRenderer** ob'ektni yarating. **CategorySeries**ni yarating va **DefaultRenderer** **AChartEngine** kutubxonada aniqlangan.

```
DefaultRenderer dr = new DefaultRenderer();
```

6. Har bir rang uchun diagrammada **SimpleSeriesRendererni** yarating va uni bu rangga o'rnatish. Keyin har bir **SimpleSeriesRendererni DefaultRendererga** qo'shing. SHunday qilib, har bir **Seriesga bitta Renderga** egamiz. Misol uchun **Render** boshqa **Render**ni o'z ichiga olishi mumkin, shunday qilib, nimtoifalarni yaratish mumkin:

```
for (int v=0; v<4; v++){
    series.add(bars[v], values[v]);
SimpleSeriesRenderer r = new SimpleSeriesRenderer();
    r.setColor(colors[v]);
    dr.addSeriesRenderer(r);
}
```

7. **PieChartIntent** ob'ektni yarating va unga **CategorySeries** va **DefaultRendererni** uzating.

```
return ChartFactory.getPieChartIntent(this, series, dr, "Fruit Salad");
```

PieChartIntent yordamida alohida faoliyat sifatida diagrammani ko'rsatish mumkin.

8. Kutubxonalar usullari yordamida imzolarning o'lchamlari va rangni o'zgartirish, zumni kiritish mumkin:

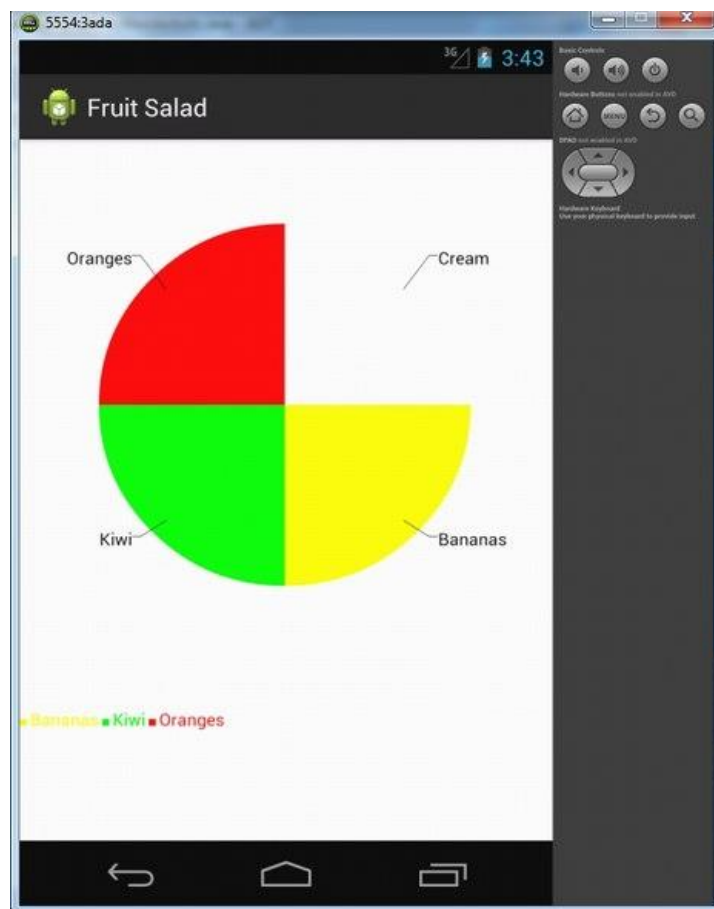
```
dr.setZoomEnabled(true);  
dr.setChartTitleTextSize(20);  
dr.setLegendTextSize(TEXT_SIZE);  
dr.setChartTitleTextSize(20);  
dr.setZoomButtonsVisible(false);  
dr.setLabelsTextSize(TEXT_SIZE);  
dr.setLegendTextSize(TEXT_SIZE);  
dr.setLabelsColor(Color.BLACK);
```

9. Qulaylik uchun qo'shimcha o'zgaruvchini yaratish mumkin, unda matnning o'lchami saqlanadi.

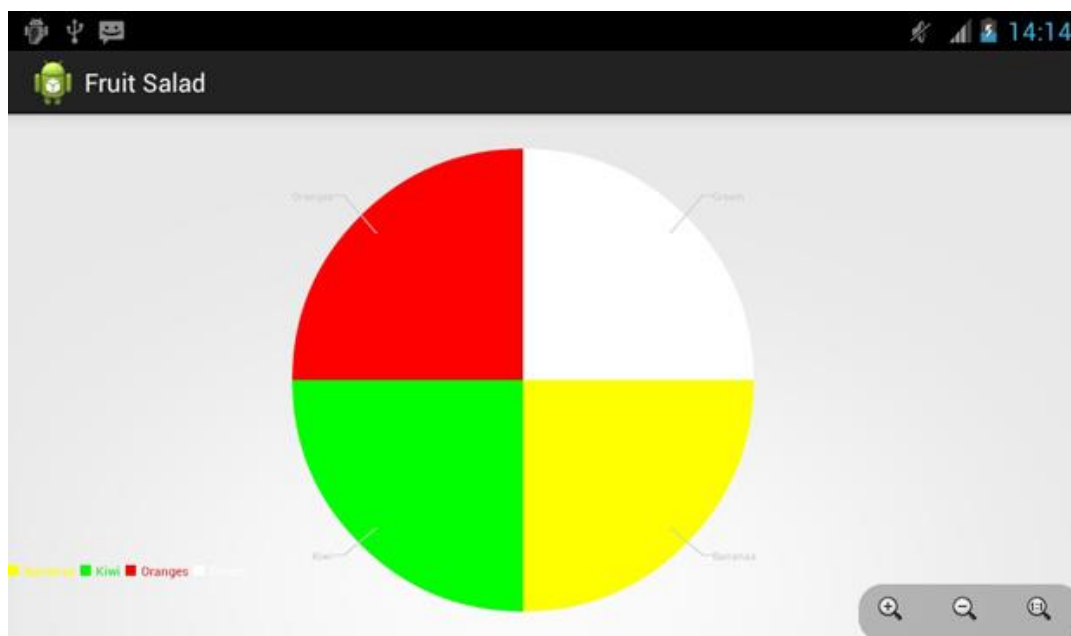
```
private static final int TEXT_SIZE = 40;
```

```
Intent intent = buildIntent();  
startActivity(intent);  
}
```

```
public Intent buildIntent() {  
    int[] values = new int[] { 25,25,25,25 };  
    ...  
    dr.addSeriesRenderer(r);  
}  
dr.setChartTitleTextSize(20);  
...  
dr.setLabelsColor(Color.BLACK);  
return ChartFactory.getPieChartIntent(  
this, series, dr, "Fruit Salad");  
}
```



7.1-rasm. Emulyatorda ishga tushirilgan ilova



7.1-rasm. package qurilmada ishga tushirilgan com.mypackage.graphics ilovasi

15.1-listing. MainActivity.java kodi:

```
import org.achartengine.ChartFactory;
import org.achartengine.chart.PieChart;
import org.achartengine.model.CategorySeries;
import org.achartengine.renderer.DefaultRenderer;
import org.achartengine.renderer.SimpleSeriesRenderer;
import android.content.Context;
import android.content.Intent;
import android.graphics.Color;
import android.app.Activity;
import android.os.Bundle;
public class MainActivity extends Activity {
    private static final int TEXT_SIZE = 40;
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        Intent intent = buildIntent();
        startActivity(intent);
    }

    public Intent buildIntent() {
        int[] values = new int[] { 25,25,25,25 };
        String[] bars = new String[] { "Bananas", "Kiwi", "Oranges",
"Cream"};
```

```

        int[] colors = new int[] { Color.YELLOW, Color.GREEN,
        Color.RED, Color.WHITE };

        CategorySeries series = new CategorySeries("Pie Chart");
        DefaultRenderer dr = new DefaultRenderer();

        for (int v=0; v<4; v++){
            series.add(bars[v], values[v]);
            SimpleSeriesRenderer r = new SimpleSeriesRenderer();
            r.setColor(colors[v]);
            dr.addSeriesRenderer(r);
        }
        dr.setZoomButtonsVisible(true);
        dr.setZoomEnabled(true);
        dr.setChartTitleTextSize(20);
        dr.setLegendTextSize(TEXT_SIZE);
        dr.setChartTitleTextSize(20);
        dr.setZoomButtonsVisible(false);
        dr.setLabelsTextSize(TEXT_SIZE);
        dr.setLegendTextSize(TEXT_SIZE);
        dr.setLabelsColor(Color.BLACK);
        return ChartFactory.getPieChartIntent(this, series, dr, "Fruit Salad");
    }}}

```

4. Hisobning tarkibi

1. Ishlab chiqilgan loyihaning Xml fayli printskrinini keltirish.
2. Ishlab chiqilgan loyiha kodining listingini keltirish.

Nazorat savollari

1. Tashqi kutubxonani qanday ulash mumkin?
2. Diagrammalarni qurish uchun nima bajarilishi zarur?
3. Diagrammada har bir rangning yaratilishini tushuntiring?
4. Imzolar o'lchami va rangini qanday o'zgartirish mumkin?