**CustomBarChart**

**Component Description:**

**1.RelativeLayout**

**└BarChart**

BarChart class is the view that represents a zoomable and scrollable barchart.

**Public methods :**

1. **public** **void** initializeChart(Object[] yAxisMeasurs, ArrayList<Bar> listOfBars)

initializes a bar chart with list of bars and array of measurs to be displayed on y axis.

**@param** yAxisMeasurs :array of measurs to be displayed on y axis

**@param** listOfBars: list of bars

2. **public** **void** setBackgroundColor(**int** color)

sets background color of the chart..

3. **public** **void** updateChart(ArrayList<Bar> listOfBars)

updates the chart with new list of bars.

**2.LinearLayout**

**└ Bar**

Bar class is the view that represents a bar BarChart.

**Public constructor:**

**public** Bar(Context context, **int** width, **int** height)

Constructor creating a Bar object.

**@param** context :Current context

**@param** width :width in pixel

**@param** height : height as an index of bar's height unit in the array {@link BarChart#initializeChart(Object[], java.util.ArrayList)}yAxisMeasure of the {@link BarChart}

**Public methods :**

1. **public** **void** addSubBar(SubBar objSubBar)

Adds subbar to the bar.

2. **public** **void** setTitle(String title)

sets title of the bar.

3. **public** **void** updateChart(ArrayList<Bar> listOfBars)

updates the chart with new list of bars.

**Inner Class:**

**SubBar**: SubBar class represents a SubBar in Bar.

**Public constructor:**

**public** SubBar(**float** hieght)

Constructor creating a Bar object.

@param height : height as an percentage/weight of the space it occupies from its parent Bar

**Public methods :**

1. **public** **void** setBarColor(**int** color)

sets color of the SubBar.

2. **public** **void** setBarDrawable(Drawable background)

sets Drawable of the SubBar.

3. **public** **void** setBarResourceDrawable(**int** resid)

sets ResourceDrawable of the SubBar.

**Example Usage** :

**import** java.util.ArrayList;

**import** android.app.Activity;

**import** android.graphics.Color;

**import** android.os.Bundle;

**import** android.view.Menu;

**import** android.view.View;

**import** android.view.View.OnClickListener;

**import** android.widget.Button;

**public** **class** SampleActivity **extends** Activity {

**boolean** flag = **true**;

//Values to be displayed on y axis of the chart

String[] yAxisMeasurs = { "bad", "good", "better", "best", "excel" };

//values for bar widths in pixel

**int**[] pointsX = { 70, 100, 60, 70, 50, 50, 60, 50, 70, 55 };

//values for bar heights as an index of bars unit in yAxisMeasurs

//3=better

//2=good

//5=excel and so on

**int**[] pointsY = { 3, 2, 5, 3, 4, 3, 2, 4, 5, 2 };

//values for bars colors

**int**[] colors = { R.drawable.*c1*, R.drawable.*c2*, R.drawable.*c3*,

R.drawable.*c4*, R.drawable.*c5*, R.drawable.*c4*, R.drawable.*c2*,

R.drawable.*c1*, R.drawable.*c3*, R.drawable.*c5* };

//Different values for another set of bars

**int**[] pointsXX = { 50, 50, 50, 50, 50, 50, 50, 50, 50, 50 };

**int**[] pointsYY = { 3, 2, 3, 4, 1, 3, 5, 4, 1, 2 };

String[] colorsS = { "#bbc0362c", "#bb6A6A02", "#bb2262f3", "#bb660693", "#bb006233", "#bbc0362c", "#bb6A6A02", "#bb2262f3", "#bb660693", "#bb006233" };

BarChart objBarChart;

ArrayList<Bar> listOfBars = **new** ArrayList<Bar>();

ArrayList<Bar> listOfBars2 = **new** ArrayList<Bar>();

Button b;

@Override

**protected** **void** onCreate(Bundle savedInstanceState) {

**super**.onCreate(savedInstanceState);

setContentView(R.layout.*activity\_sample*);

objBarChart = (BarChart) findViewById(R.id.*barChart1*);

//objBarChart.setBackgroundColor(Color.parseColor("#ffffC0C0"));

objBarChart.setBackgroundResource(R.drawable.*c6*);

//Creating two different lists of bars.

**for** (**int** k = 0; k < pointsX.length; k++) {

**int** j = k;

Bar b = **new** Bar(**this**, pointsX[j], pointsY[j]);

Bar.SubBar subBar1 = b.**new** SubBar(40f);

Bar.SubBar subBar2 = b.**new** SubBar(120f);

subBar1.setBarResourceDrawable((colors[j]));

b.addSubBar(subBar1);

subBar2.setBarResourceDrawable((colors[(colors.length - 1) - j]));

b.addSubBar(subBar2);

b.setTitle("Bar"+k);

listOfBars.add(b);

b = **new** Bar(**this**, pointsXX[j], pointsYY[j]);

subBar1 = b.**new** SubBar(40f);

subBar2 = b.**new** SubBar(120f);

subBar1.setBarColor(Color.*parseColor*(colorsS[j]));

b.addSubBar(subBar1);

subBar2.setBarColor(Color.*parseColor*(colorsS[(colors.length - 1)- j]));

b.addSubBar(subBar2);

b.setTitle("Bar"+k);

listOfBars2.add(b);

}

//initializing BarChart

objBarChart.initializeChart(yAxisMeasurs, listOfBars);

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

b.setOnClickListener(**new** OnClickListener() {

@Override

**public** **void** onClick(View v) {

**if** (flag) {

objBarChart.updateChart(listOfBars2);

flag = **false**;

} **else** {

objBarChart.updateChart(listOfBars);

flag = **true**;

}

}

});

}

@Override

**public** **boolean** onCreateOptionsMenu(Menu menu) {

**return** **true**;

}}

***activity\_sample.xml***

<RelativeLayout xmlns:android=*"http://schemas.android.com/apk/res/android"*

xmlns:tools=*"http://schemas.android.com/tools"*

android:layout\_width=*"match\_parent"*

android:layout\_height=*"match\_parent"*

android:paddingBottom=*"@dimen/activity\_vertical\_margin"*

android:paddingLeft=*"@dimen/activity\_horizontal\_margin"*

android:paddingRight=*"@dimen/activity\_horizontal\_margin"*

android:paddingTop=*"@dimen/activity\_vertical\_margin"*

tools:context=*".SampleActivity"* >

<com.example.custombarchart.BarChart

android:id=*"@+id/barChart1"*

android:layout\_width=*"match\_parent"*

android:layout\_height=*"200dp"* >

</com.example.custombarchart.BarChart>

<Button

android:id=*"@+id/button1"*

android:layout\_width=*"wrap\_content"*

android:layout\_height=*"wrap\_content"*

android:layout\_below=*"@+id/barChart1"*

android:layout\_centerHorizontal=*"true"*

android:layout\_marginTop=*"53dp"*

android:text=*"Button"* />

</RelativeLayout>

**Note:** The demo project CustomBarChart is a library project. If you want to run the demo project, first you need to uncheck its library project option. You can use this component by either simply copying respective files in your project or adding the CustomBarChart project as a library.

1> If you simply copy paste the files in your project, BarChart will be available to you in **Palette window** under **Custom & Library views** option.

2>If you add it as a library project, just restart the Eclips after adding it. Now BarChart should be there in **Palette window** under **Custom & Library views** option. If not, then you need to add it manually in XML.

<com.example.custombarchart.BarChart

android:id=*"@+id/barChart1"*

android:layout\_width=*"width"*

android:layout\_height=*"height"* >

</com.example.custombarchart.BarChart>

**Configuration Instructions:**

**SVN URL: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**File List with description for the file**

|  |  |  |
| --- | --- | --- |
| No. | File Name | Description |
| 1 | com.example.custombarchart.BarChart | BarChart class is the view that represents a barchart. |
| 2 | com.example.custombarchart.Bar | Bar class is the view that represents a bar in BarChart. |
| 3 | com.example.custombarchart.Bar.SubBar | SubBar class represents a SubBar in Bar. |

**Contact information for the programmer:**

Yogesh Pangam.

**Known Bugs:**