Libchart

Simple PHP chart drawing library

1. How to Create a vertical bar chart

1.1 Create a bar chart object

We first include the chart library in our project, and then create a chart object of dimensions 500 x 250 pixels. If not specified, the image dimensions will be defaulted to sensible values. There are currently 4 types of charts : *VerticalBarChart*, *HorizontalBarChart*, *LineChart* and *PieChart*.

```
include "libchart/libchart.php";

$chart = new VerticalBarChart(500, 250);
```

1.2 Create some bars

We add 4 bars to our chart. For that we create a *data set* and add some bars to it. Each bar is a *(label, value)* couple, that we call here a *Point*.

```
$dataSet = new XYDataSet();
$dataSet->addPoint(new Point("Jan 2005", 273));
$dataSet->addPoint(new Point("Feb 2005", 321));
$dataSet->addPoint(new Point("March 2005", 442));
$dataSet->addPoint(new Point("April 2005", 711));
```

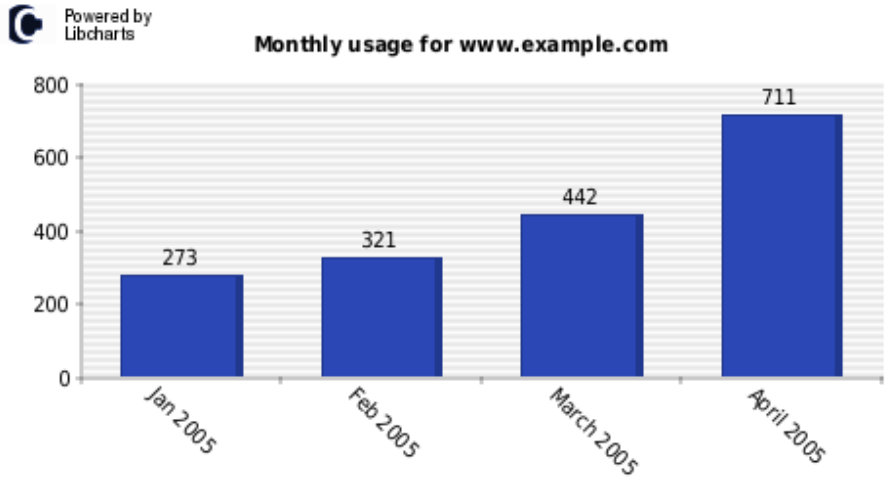
Then we link the data set to the chart:

```
$chart->setDataSet($dataSet);
```

1.3 Display the chart

We set the title and then render the chart to a PNG image.

```
$chart->setTitle("Monthly usage for www.example.com");
$chart->render("generated/demo1.png");
```



...et voilà!

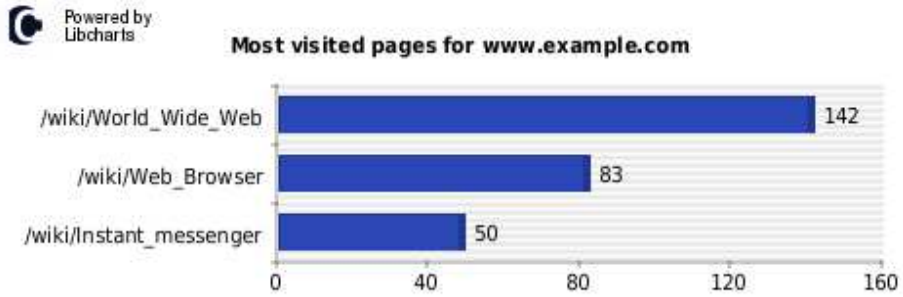
2. How to create a horizontal bar chart

Creating a horizontal bar chart is similar to the previous example.
Here is the source code and the corresponding result.

```
$chart = new HorizontalBarChart(500, 170);

$dataSet = new XYDataSet();
$dataSet->addPoint(new Point("/wiki/Instant_messenger", 50));
$dataSet->addPoint(new Point("/wiki/Web_Browser", 83));
$dataSet->addPoint(new Point("/wiki/World_Wide_Web", 142));
$chart->setDataSet($dataSet);

$chart->setTitle("Most visited pages for www.example.com");
$chart->render("generated/demo2.png");
```



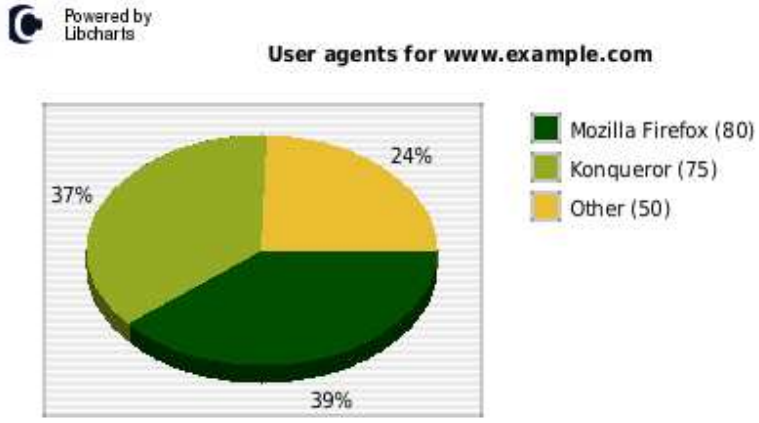
3. How to create a pie chart

In order to create a pie chart, we enter 3 points and their associated absolute values. Corresponding percentages are computed automatically.

```
$chart = new PieChart(500, 250);

$dataSet = new XYDataSet();
$dataSet->addPoint(new Point("Mozilla Firefox (80)", 80));
$dataSet->addPoint(new Point("Konqueror (75)", 75));
$dataSet->addPoint(new Point("Other (50)", 50));
$chart->setDataSet($dataSet);

$chart->setTitle("User agents for www.example.com");
$chart->render("generated/demo3.png");
```



4. How to create a multiple line chart

We already saw how to create a XYDataSet. There is another kind of dataset, *XYSeriesDataSet*, which allows for several lines/bars concurrently. A *XYSeriesDataSet* is really a container for several *XYDataSet*. Here is how it goes:

4.1 Create some series

We create several *XYDataSet*s as earlier.

```
include "../libchart/classes/libchart.php";

$chart = new LineChart(500, 250);

$serie1 = new XYDataSet();
$serie1->addPoint(new Point("06-01", 273));
$serie1->addPoint(new Point("06-02", 421));
$serie1->addPoint(new Point("06-03", 642));
$serie1->addPoint(new Point("06-04", 799));
$serie1->addPoint(new Point("06-05", 1009));
$serie1->addPoint(new Point("06-06", 1106));

$serie2 = new XYDataSet();
$serie2->addPoint(new Point("06-01", 280));
$serie2->addPoint(new Point("06-02", 300));
$serie2->addPoint(new Point("06-03", 212));
$serie2->addPoint(new Point("06-04", 542));
$serie2->addPoint(new Point("06-05", 600));
$serie2->addPoint(new Point("06-06", 850));
```

4.2 Create a XYSeriesDataSet

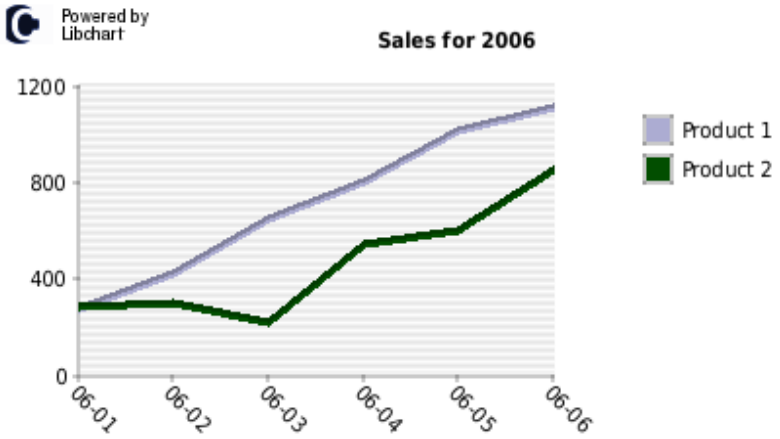
Then we create a *XYSeriesDataSet* and add our two series to it. Then we link our main data set to the chart.

```
$dataSet = new XYSeriesDataSet();
$dataSet->addSerie("Product 1", $serie1);
$dataSet->addSerie("Product 2", $serie2);
$chart->setDataSet($dataSet);
```

4.3 Render the chart

We render the chart as usual:

```
$chart->setTitle("Sales for 2006");
$chart->render("generated/demo4.png");
```



You can try out *XYSeriesDataSet* in conjunction with *HorizontalBarChart* and *VerticalBarChart* too!

5. How to customize

5.1 Changing the colors

We can change the colors for each type of chart via the Palette object.

Let's go back to the previous Pie Chart code, and tweak it a bit!

```
$chart = new PieChart(500, 250);

$chart->getPlot()->getPalette()->setPieColor(array(
        new Color(255, 0, 0),
        new Color(255, 255, 255)
));

$dataSet = new XYDataSet();
$dataSet->addPoint(new Point("Amanita abrupta", 80));
$dataSet->addPoint(new Point("Amanita arocheae", 75));
$dataSet->addPoint(new Point("Clitocybe dealbata", 50));
$dataSet->addPoint(new Point("Cortinarius rubellus", 70));
$dataSet->addPoint(new Point("Gyromitra esculenta", 37));
$dataSet->addPoint(new Point("Lepiota castanea", 37));
$chart->setDataSet($dataSet);

$chart->setTitle("Deadly mushrooms");
$chart->render("generated/demo5.png");
```

We can add as many (or as few) colors as we like. Notice how the colors cycle if we have more items than the number of colors defined.

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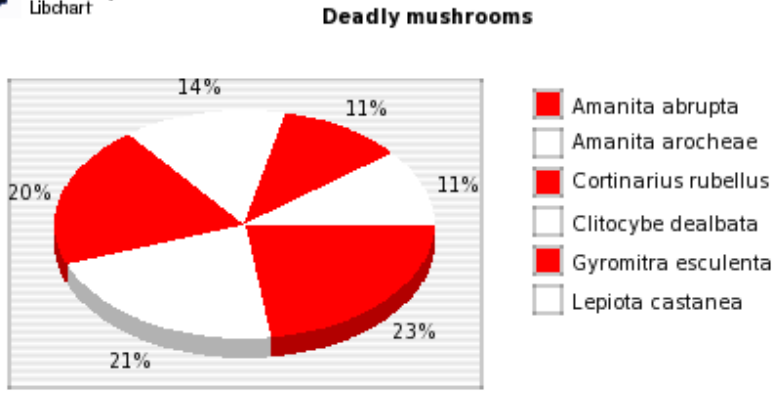

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