Other types of plots

Spoken Tutorial Project
http://spoken-tutorial.org
National Mission on Education through ICT

http://sakshat.ac.in

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Objectives

At the end of this tutorial, you will be able to -

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At the end of this tutorial, you will be able to -

- **Create pie charts**
- **Create bar charts**
- **Find more information on matplotlib**

System Specifications

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- **`Python 2.7.6`**

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- **`Python 2.7.6`**
- **`IPython 4.0.0`**

Pre-requisites

To practise this tutorial, you should know how to

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If not, see the pre-requisite Python tutorials on http://spoken-tutorial.org

Pie chart

A pie chart is a circular chart divided into sectors, illustrating proportion.

pie() function

- **Syntax :**

```
pie(values,labels=labels)
```

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  `pie(values,labels=labels)`
  - **values, the data to be plotted**
  - **labels, the label for each wedge in the pie chart**

Exercise 1: Pie chart

Plot a pie chart representing the profit percentage of company A. Use the data from the file company-a-data.txt.

Exercise 2: Pie chart

- **Plot a pie chart with the same data with colors for each wedges as white, red, magenta, yellow, blue, green, cyan, yellow, magenta, and blue.**

Exercise 2: Pie chart

- **Plot a pie chart with the same data with colors for each wedges as white, red, magenta, yellow, blue, green, cyan, yellow, magenta, and blue.**
- **Clue - try `pie?` in your `ipython` interpreter**

Bar chart

A bar chart is a chart with rectangular bars with lengths proportional to the values that they represent.

bar() function

- **Syntax : `bar(x, y)`**

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  - **x - a sequence of data**

bar() function

- **Syntax : `bar(x, y)`**
  - **x - a sequence of data**
  - **y - a sequence of data, the same length of x**

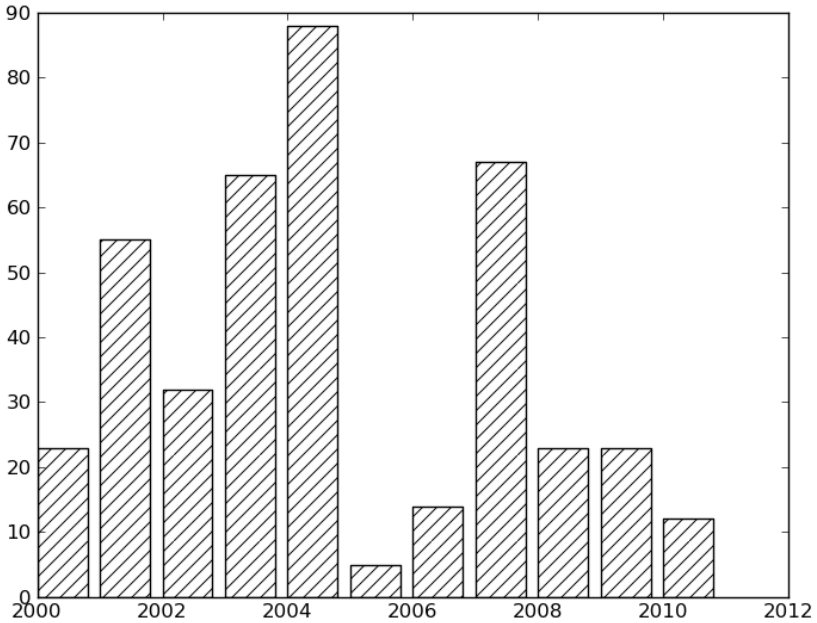
Exercise 3: Bar chart

Plot a bar chart representing the profit percentage of company A. Use the data from the file company-a-data.txt.

Exercise 4: Bar chart

- **Plot a bar chart which is not filled and which is hatched with 45^o slanting lines as shown in the image.**
- **The data for the chart may be obtained from the file 'company-a-data.txt.'**

Exercise 5: Bar chart



- Clue - try `bar?` in `ipython` interpreter

Getting help on matplotlib

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- **Plot a pie chart using `pie()` function**
- **Plot a bar chart using `bar()` function**

Summary

In this tutorial, we learnt to -

- Plot a pie chart using `pie()` function
- Plot a bar chart using `bar()` function
- Access the `matplotlib` online help.

Evaluation

1. **What statement can be issued to generate a bar chart with vertical line hatching.**
   - **bar(x, y, color='w', hatch='/')**
   - **bar(x, y, fill=False, hatch='//')**
   - **bar(x, y, fill=False, hatch='|')**
   - **bar(x, y, color='w', hatch='\')**

Solutions

1. **bar(x, y, fill=False, hatch='|')**

Forum to answer questions

- **Do you have questions in THIS Spoken Tutorial?**
- **Choose the minute and second where you have the question.**
- **Explain your question briefly.**
- **Someone from the FOSSEE team will answer them. Please visit**

http://forums.spoken-tutorial.org/

Forum to answer questions

- **Questions not related to the Spoken Tutorial?**
- **Do you have general / technical questions on the Software?**
- **Please visit the FOSSEE Forum**

  http://forums.fossee.in/
- **Choose the Software and post your question.**

Textbook Companion Project

- **The FOSSEE team coordinates coding of solved examples of popular books**
- **We give honorarium and certificate to those who do this**

For more details, please visit this site:

http://tbc-python.fossee.in/

Acknowledgements

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- It is supported by the National Mission on Education through ICT, MHRD, Government of India
- More information on this Mission is available at: http://spoken-tutorial.org/NMEICT-Intro

THANK YOU!

For more Information, visit our website
http://fossee.in/