# Other types of plots

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

http://sakshat.ac.in

Script: Thirumalesh H S

Narrator: Prathamesh S.

IIT Bombay

16 March 2017

# Learning Objectives

# Learning Objectives

- **Create scatter plot**

# Learning Objectives

- **Create scatter plot**
- **Create log-log plots**

# System Specifications

# System Specifications

- **Ubuntu Linux 14.04**

# System Specifications

- **Ubuntu Linux 14.04**
- **`Python 3.4.3`**

# System Specifications

- **Ubuntu Linux 14.04**
- **`Python 3.4.3`**
- **`IPython 5.1.0`**

# Pre-requisites

# Pre-requisites

- **Run basic Python commands on the ipython console**

# Pre-requisites

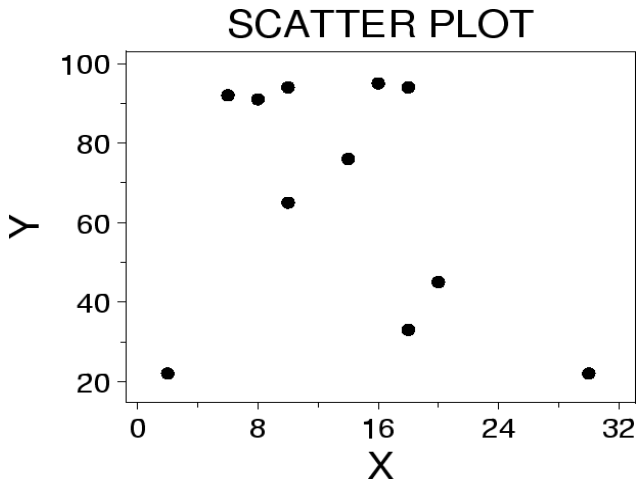
- **Run basic Python commands on the ipython console**
- **Load data from files and Plot data**

# Pre-requisites

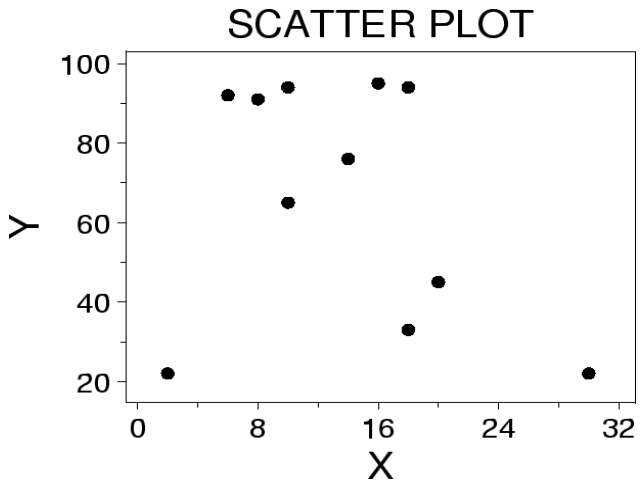
- Run basic Python commands on the ipython console
- Load data from files and Plot data
- If not, see the relevant Python tutorials on http://spoken-tutorial.org

# Scatter Plot

# Scatter Plot

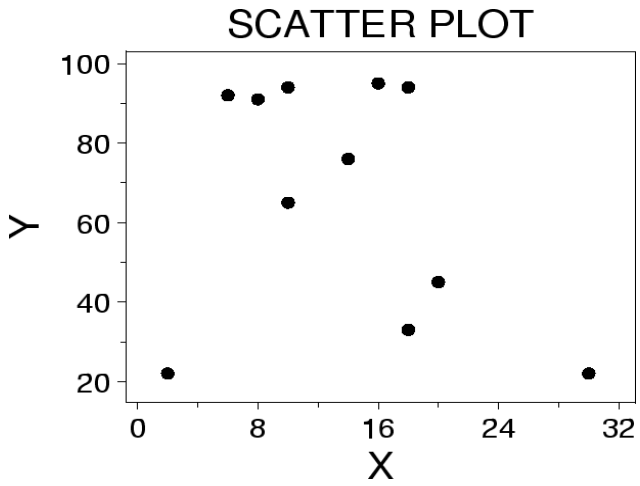


# Scatter Plot




- **In a scatter plot, the data is displayed as a collection of points**

# Scatter Plot




- In a scatter plot, the data is displayed as a collection of points
- Each point determines its position on the x and y axes

# Exercise 1

- Plot a scatter plot showing the percentage profit of Company A from the year 2000 to 2010
- The data for the same is available in the file 'company-a-data.txt'

# Exercise 1

- **company-a-data.txt file is available in the code file link of this tutorial**
- **Please download and use it**

# scatter() function

# scatter() function

**scatter() function is used to generate the scatter graph**

# scatter() function

**scatter() function is used to generate the scatter graph**

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

# scatter() function

**scatter() function is used to generate the scatter graph**

- **Syntax : `scatter(x,y)`**
  - **x - a sequence of data**
  - **y - a sequence of data having same length as that of x**

# Exercise 2

- **Read the documentation of scatter**
- **Plot a scatter plot of the same data in company-a-data.txt with red diamond markers**

# Log-log graph

- **Log-log graph is**

# Log-log graph

- **Log-log graph is**
  - **A log-log plot is a two-dimensional graph of numerical data**

# Log-log graph

- **Log-log graph is**
  - **A log-log plot is a two-dimensional graph of numerical data**
  - **It uses logarithmic scales on both axes**

# Log-log graph

- **Log-log graph is**
  - **A log-log plot is a two-dimensional graph of numerical data**
  - **It uses logarithmic scales on both axes**
  - **Graph appears as straight line due to non-linear scaling**

# loglog()function

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

# loglog()function

- **Syntax : `loglog(x, y)`**
  - **`x` - a sequence of data**

# loglog()function

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

# Exercise 3

**Plot a log-log chart of $y = 5x^3$ for $x$ from 1-20**

# Summary

In this tutorial, we learnt to

- Plot a scatter plot using `scatter()` function
- Plot a log-log graph using `loglog()` function

# Assignment

1. **scatter(x, y, color='blue', marker='d') and plot(x, y, color='b', marker='d') does exactly the same?**
   - **True**
   - **False**

# Solution to assignment

# Solution to assignment

1. **False**

# 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

- Spoken Tutorial Project is a part of the Talk to a Teacher project
- 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/**