Using Python Modules

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

http://sakshat.ac.in

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- **Execute python scripts from command line.**
- **Use import in scripts.**
- **Import scipy and pylab modules.**
- **Use python standard modules and 3rd party modules.**

System Specifications

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- **`IPython 4.0.0`**

Pre-requisite

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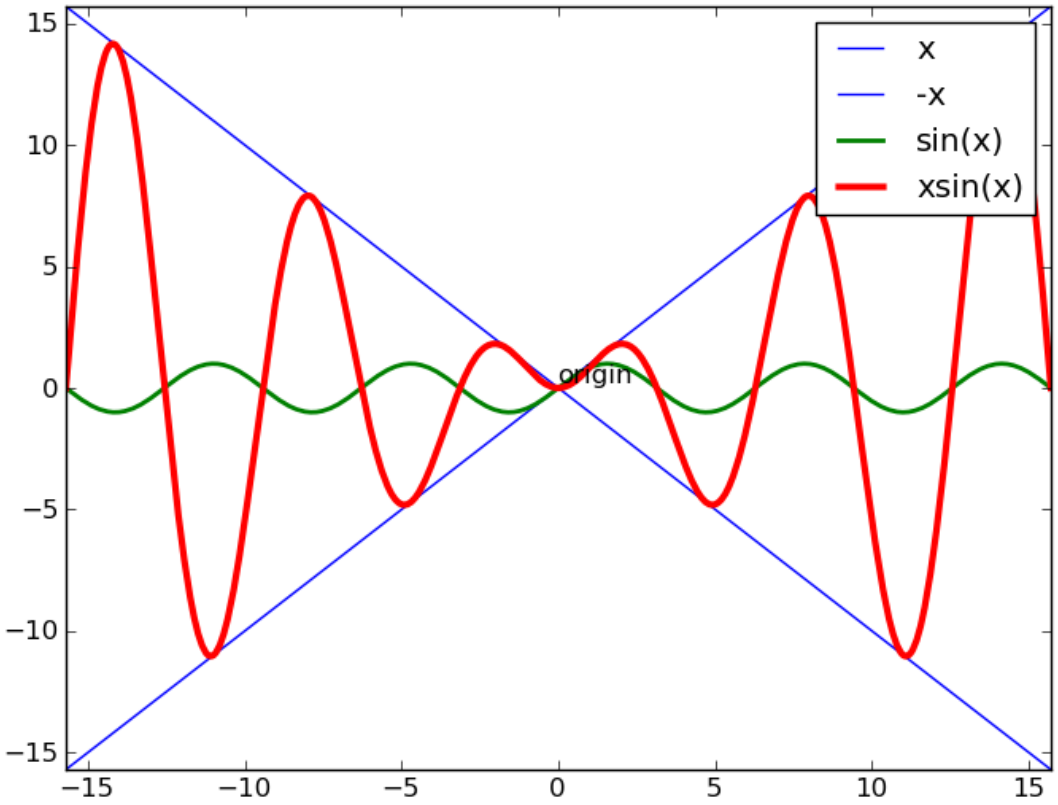
If not, see the pre-requisite Python tutorials on http://spoken-tutorial.org

Running Python script from command line

- **Create a simple python script to print hello world.**

Four plot problem



Fix `linspace()` problem

```
from scipy import *
```

Better way of fixing

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`*` means import all functions from name-space `scipy`.

Another Fix

- **Open the script another-fix.py**

Another Fix

- **Open the script another-fix.py**
- **Run the script another-fix.py**

Assignment 1

- **Write a python script to plot a sine wave from -2π to 2π .**

What is a module?

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- **Definitions from a module can be imported into other modules or into the main module.**

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- **Some of the standard modules are,**
  - **Math: `math`, `random`**
  - **Internet access: `urllib2`, `smtplib`**
  - **System, Command line arguments: `sys`**

Python standard library

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  - **Operating system interface: `os`**

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- **More information**
  - **http://docs.python.org/library**

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- **Run scripts from command line,**
- **Import modules by specifying the module name followed by an asterisk.**
- **Import only the required functions from modules by specifying the function name.**
- **Use python standard library.**

Evaluation

1. **Which among this is correct ?**

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   - `from scipy import plot`
   - `from numpy import plot`
   - `from matplotlib import plot`
   - `from pylab import plot`

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2. **Functions `xlim()` and `ylim()` can be imported to the current name-space as,**
   - `from pylab import xlim, ylim`
   - `import pylab`
   - `from scipy import xlim, ylim`
   - `import scipy`

Solutions

1. `from pylab import plot`

Solutions

1. `from pylab import plot`
2. `from pylab import xlim, ylim`

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/

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- 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/