

Writing Python Scripts

Spoken Tutorial Project

<http://spoken-tutorial.org>

National Mission on Education through ICT

<http://sakshat.ac.in>

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Learning Objectives



Learning Objectives

► What is importing?



Learning Objectives

- ▶ **What is importing?**
- ▶ **Write your own Python modules**



Learning Objectives

- ▶ What is importing?
- ▶ Write your own Python modules
- ▶ Understand the `__name__ == "__main__"` idiom



System Specifications



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► Ubuntu Linux 16.04



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- ▶ **Ubuntu Linux 16.04**
- ▶ **Python 3.4.3**



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- ▶ **IPython 5.1.0**
- ▶ **Gedit text editor**



Pre-requisite

To practise this tutorial, you should know how to



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- ▶ **run basic Python commands on the ipython console**



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- ▶ use python modules



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- ▶ run basic Python commands on the ipython console
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If not, see the relevant Python tutorials on <http://spoken-tutorial.org>



Python Modules



Python Modules

- ▶ We can write Python modules to bundle functions



Python Modules

- ▶ We can write Python modules to bundle functions
- ▶ We can then make use of these functions by importing modules to other scripts



__name__ variable

- ▶ Test code should only be executed when we run the python script independently



__name__ variable

- ▶ Test code should only be executed when we run the python script independently
- ▶ To execute the test code when the module is imported to other scripts, we can use `__name__` variable



Python script

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- ▶ **As an independent stand-alone script or**



Python script

Every Python file can be run in two ways:

- ▶ **As an independent stand-alone script or**
- ▶ **As a Python module which can be imported by other Python scripts or modules**



Summary

- ▶ Import a module
- ▶ Use a script as a module
- ▶ Write test condition using the `__name__` variable
- ▶ Restart IPython3 if a changed module is to be imported again



Evaluation

1. Which of the following variables contains the locations to search for python modules

- ▶ `sys.pythonpath`
- ▶ `sys.path`
- ▶ `os.pythonpath`
- ▶ `os.path`



2. A module should contain only one function

- ▶ True
- ▶ False



Solutions

1. `sys.path`

2. `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/>



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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/>

