



Python Training.....

-- Jeetendra Bhattad



Agenda

- History
- Popularity ?
- Hello Universe – First Python Program
- Interpreted, Compiled or Both ?
- General guidelines



Introduction - History

- Developed by Guido Van Rossum in 1989.
- Ranked #1 for 4th continuous year by Code-eval, #4th - RedMonk, #5th - GitHub
- Named after British comedy group Monty Python.
- Major Releases with Dates :-
 - 1.0 January 1994
 - 2.0 October 2000
 - 2.7 July 2010
 - 3.0 Dec 2008
- Latest Releases :-
 - 2.7.11 December 2015
 - 3.5.1 December 2015



Reasons for Popularity

- Supports Multi-paradigm : Procedural, Object Oriented, Functional etc. Hence also known as General purpose programming language.
- Portable : Write Once Run Everywhere.
- Readable, reusable, easily maintainable.
- Python code is 1/3rd to 1/5th of C, C++ or Java code.
- Support Libraries : has prebuilt large collection of libraries with portable functionality.
- Python code can invoke C & C++ libraries, easily integrable with Java, .Net components.
- Easy to interface with serial port devices, can interact with interfaces like SOAP, XML-RPC etc.
- Implemented in C, hence execution is faster.
- Open Source.

Continued.....



Popularity continued...

- Who all use ?
 - Google uses extensively in its web search systems.
 - Youtube video sharing service.
 - Dropbox storage service.
 - Bit-torrent, Google's App Engine etc.
 - Intel, Cisco, HP, IBM, Imagination use Python for Hardware testing.
 - NASA use Python for scientific programming tasks.
- What can be done ?
 - System Programming
 - GUI
 - Internet Scripting
 - Database Programming
 - Rapid prototyping
 - Numeric & Scientific Programming
 - Games, Serial port interfacing, Development boards, IoT, xml, json ...everything !!!



Hello Universe !!!

hello-universe.py

```
#!/usr/bin/python
```

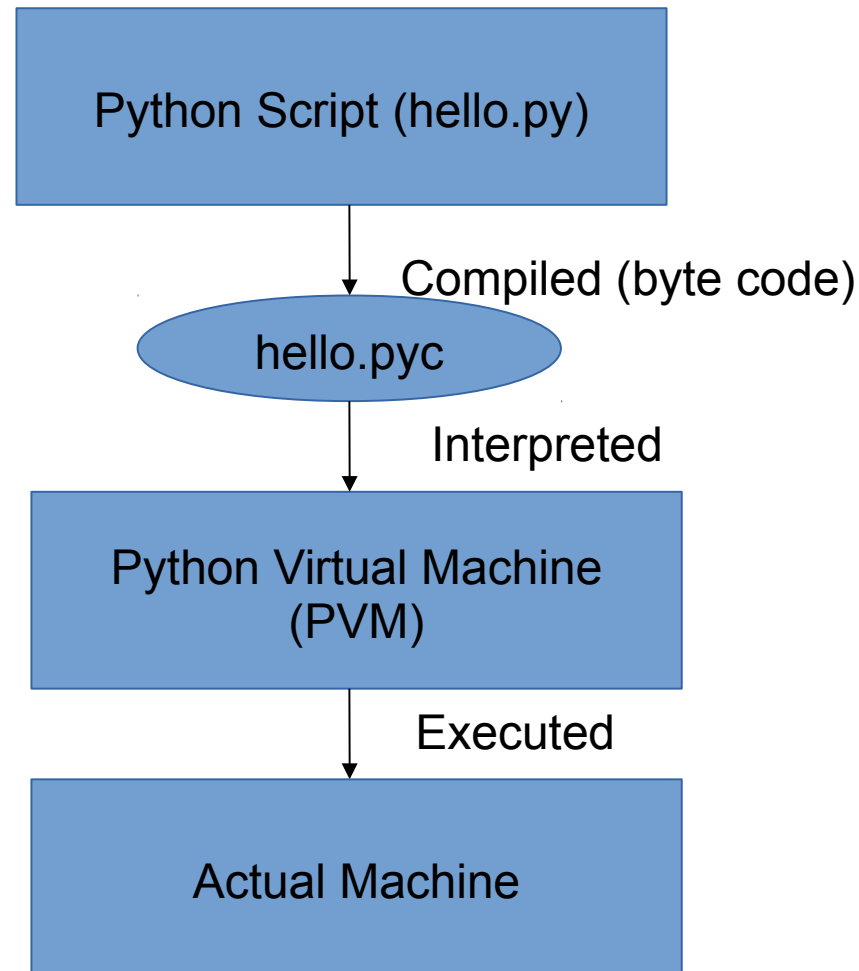
```
print("Hello Universe !!!")
```

- How to run ?
 - python hello-universe.py or
 - chmod +x hello-universe.py & ./hello-universe.py



Only Interpreted Language ?

- It is Compiled + Interpreted.





General Guidelines

- `#` - single line comment.
- `"""` or `"""` - multiline comment.
- Case-sensitive.
- 4 space indentation.
- vim, Notepad++, PyCharm, Eclipse-PyDev plugin etc editors can be used.
- Pylint, pep8 tools can be used to enforce coding standards.
- `pip install` to install 3rd party python packages / libraries.