

Assignment 1

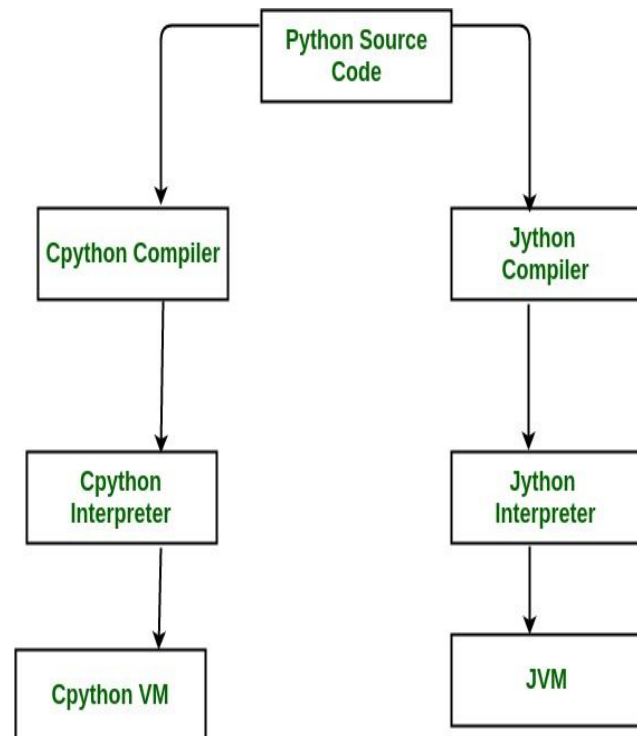
1. What is JPython and CPython ?

-> CPython

The default implementation of the Python programming language is Cpython. As the name suggests CPython is written in C language. Cpython compiles the python source code into intermediate bytecode, which is executed by the Cpython virtual machine. CPython is distributed with a large standard library written in a mixture of C and Python. CPython provides the highest level of compatibility with Python packages and C extension modules. All versions of the Python language are implemented in C because CPython is the reference implementation.

JPython or Jython

Jython is an implementation of the Python programming language that can run on the Java platform. Jython programs use Java classes instead of Python modules .Jython compiles into Java byte code, which can then be run by Java virtual machine. Jython enables the use of Java class library functions from the Python program. Jython is slow as compared to Cpython and lacks compatibility with CPython libraries



2. Difference between Python2 and Python3.

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| Basis of Comparison | Python3 | Python2 |
|----------------------|--|--|
| Release Date | 2008 | 2000 |
| Function print | print ("hello") | print "hello" |
| Division of Integers | Whenever two integers are divided, you get a float value | When two integers are divided, you always provide integer value. |
| Unicode | In Python 3, default storing of | To store Unicode string value, you |

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| | strings is Unicode. | require to define them with "u". |
| Syntax | The syntax is simpler and easily understandable. | The syntax of Python 2 was comparatively difficult to understand. |
| Iteration | The new Range() function introduced to perform iterations. | In Python 2, the xrange() is used for iterations. |
| Exceptions | It should be enclosed in parenthesis. | It should be enclosed in notations. |
| Library | Many recent developers are creating libraries which you can only use with Python 3. | Many older libraries created for Python 2 is not forward-compatible. |

3. Difference between ASCII and Unicode

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| Basis of Comparison | ASCII | Unicode |
|----------------------|---|---|
| Full form | American Standard Code for Information Exchange | Universal Character Set |
| Definition | Encoding standard for characters to be used in computers and other electronic media | A database of the numbers assigned to different characters |
| Characters supported | 128 | Can support up to 1,114,112 characters |
| Number of bytes used | 1 byte or 8 bits | 1,2 or 4 bytes – it will depend upon the encoding standard used |
| Subset or superset | ASCII is a subset of Unicode | Unicode is a superset and has UTF-8 for ASCII compatibility |
| Memory usage | Requires less memory | Requires more memory |