

Python 2.x vs 3.x

Basis of comparison	Python 3	Python 2
Release Date	2008	2000
Function print	<code>print "hello"</code>	<code>print("hello")</code>
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 strings is Unicode.	To store Unicode string value, you require to define them with "u".
Syntax	The syntax is simpler and easily understandable.	The syntax of Python 2 was comparatively difficult to understand.
Rules of ordering Comparisons	In this version, Rules of ordering comparisons have been simplified.	Rules of ordering comparison are very complex.
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.
Leak of variables	The value of variables never changes.	The value of the global variable will change while using it inside for-loop.
Backward compatibility	Not difficult to port python 2 to python 3 but it is never reliable.	Python version 3 is not backwardly compatible with Python 2.
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.

Python Tools

1. BeeWare
2. BOA Constructor
3. PyDev for Eclipse
4. PyCharm
5. wxGlade

Python Tools for Machine Learning

1. TensorFlow
2. Numpy
3. Keras
4. Theano
5. Spyder

Python Tools for Web Development

1. Django
2. CherryPy
3. Pyramid
4. TurboGears
5. Web2Py

Python Tools for Game Development

1. Pygame
2. Pykyra
3. Pyglet