**Python 2.7 vs 3x:**

**Python package manager**

pip

**Python Basic Best Practices:**

**PEP 8 and writing readable code: spaces and tabs, standard code layout and Naming convensions**

1. Python PEP8 code standard site: <https://www.python.org/dev/peps/pep-0008/>
2. 4 spaces to indicate one level of indentation, don’t use tab characters
3. A single line of code should not exceed 17-19 characters
4. Import statements should be at the top of the module
5. Standard libraries should be imported first, then third party modules and import from other modules in the same project
6. There should be a blank line between each group of imports
7. Classes and Functions at the top level can have 2 blank lines between them
8. Methods within a Class should have 1 blank line separating them
9. Within a method, blank lines should be inserted to separate conceptual grouping of code
10. Don’t insert extra space before parenthesis, brackets or braces
11. Don’t insert space before commas and colons
12. Always put a single space on either sides of binary operators
13. Don’t put more than 1 statement on the same line
14. Comments should be in human language
15. Comment should precede every section of code describing the code and be indented at the code level
16. Every **public** module, class, or method should have a properly formatted doc string
17. Objects are named according how they are used, for example a *Factory* function should be named as if it were a class because the usage case is the same as it were a class
18. Packages and modules have to have short names and lowercase letters
19. Module names have leading and trailing double underscores
20. Class names are CamelCased starting with a Capital letter
21. Exception are classes so should follow naming convention for Classes but the last word in the name should be *Err*.
22. Functions or methods, instance variables and global variables should all be lowercased with underscore separating words
23. Private (internal) methods or variable should begin with a single underscore
24. The first parameter of an instance method should always be named *self*
25. Constants to be written in all capital letters with underscore separating words

**Using Version Control**

Git