* Course Overview
* Overview
  + Install python
  + Write basic code
* Installing python
  + Install on windows
    - Python.org
    - Download
    - Add python 3.7 to path variable
    - Use windows powershell
    - Type ‘python’
  + Installation on macos
    - Python.org
    - Download for mac os
  + Installation on linux
    - Default to recent version of ubuntu
* Interactive Python
  + REPL(read evaluate print loop)
  + Type ‘\_’ to refer to most recently printed value
    - Can be used in expressions
    - Only in REPL
  + Type ‘print(‘string’) to print to command line
  + In python 2 type ‘print “string”’
    - Is a function call
  + In python 3 type ‘print(‘string’)
  + Type ‘exit()’ to exit REPL
  + Type ‘Ctrl-Z + Enter’ to exit REPL on windows
  + Type ‘Ctrl-D’ to exit REPL on linux/macOS
* Significant Whitespace
  + Control flow section are terminated by :, which requires a body
  + Ex)
    - for i in range(5):
    - x = i \* 10
    - print(x)
  + Leading whitespace is syntactically significant
  + Python uses indentation levels to demarked code blocks
    - Four spaces for each level
    - Use empty line to terminated block
  + range(num) is from 0 to num - 1
  + requires readable code
  + no clutter
  + human and computer can’t get out of sync
  + Whitespace rules
    - Prefer four spaces
    - Spaces over tabs
    - Never mix spaces and tabs
    - Be consistent on consecutive lines
    - Only deviate to improve readability
* Python Culture
  + In REPL type ‘import this’ to show zen of python
* Using the Standard Library
  + Use the import keyword
  + Ex)
    - import [module]
  + use ‘module\_name.attribute\_name’ to access attribute
  + ex)
    - math.sqrt(81)
  + type help(object) to see attributes
  + ex)
    - help(math)
  + they ‘q’ to return to REPL
  + type help(math.factorial) to gain more info function
  + type ‘from math import factorial’ to just bring in the function
  + ex usage) factorial(n)
  + can also rename the function
  + ex) from math import factorial as fac
    - fac(10)
  + / is floating point division
    - 5 / 2 return 2.5
  + // is integer division
    - 5 / 2 returns 2
  + len(string) to return count of char in string
  + str(other type) to convert to string
* Summary
* Overview