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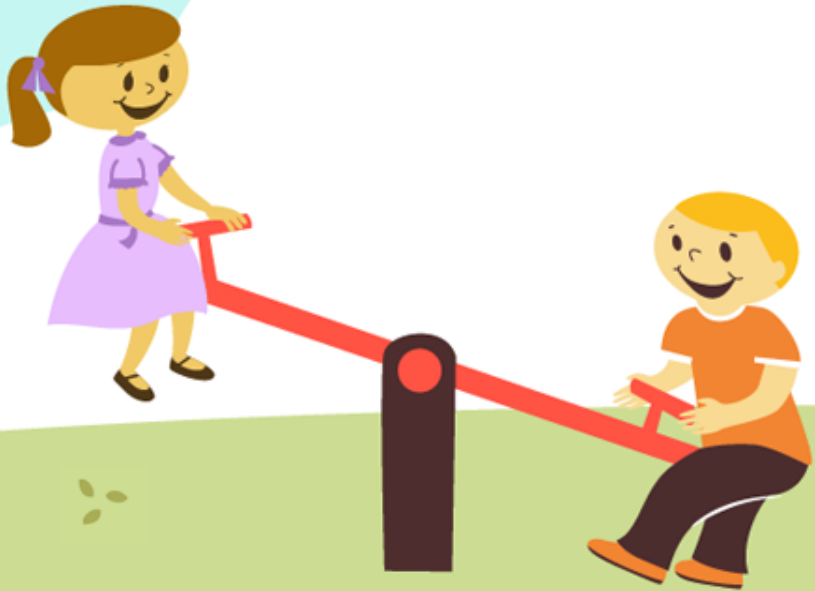
EXCEL THE LEARNING ZEAL; LIKE A KID!

Instructor:

- Experience:
    - 18+ years
    - 40+ Certifications
    - Multiple Domains

- LinkedIn Profile
    - https://www.linkedin.com/in/krishnamanchikalapudi/

Tutor: Python [Basic]

Prerequisite

- Laptop or Desktop

- Internet connection

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Session 1: Agenda

- Overview

- Software install

Install Software - Windows

Python 3.x software

https://www.python.org/downloads/windows/

Editor 'Pycharm' Community Edition

https://www.jetbrains.com/pycharm/download/#section=windows
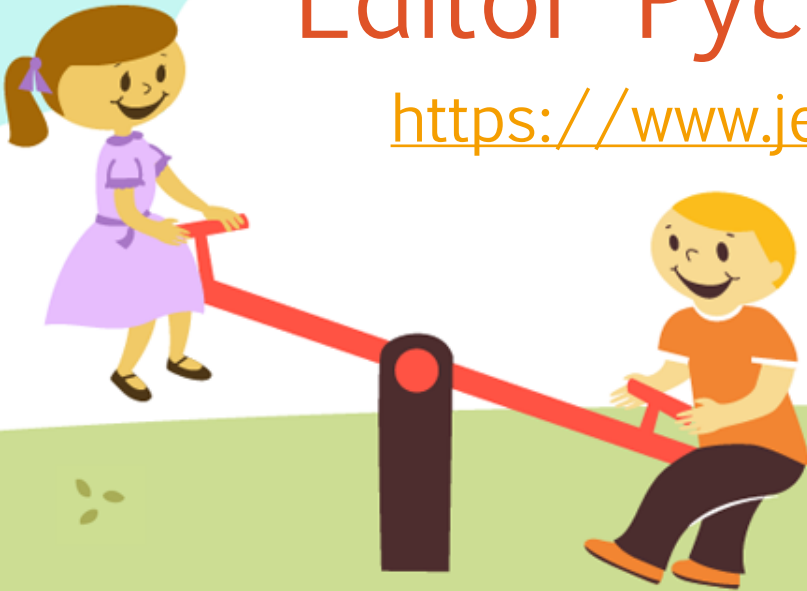
Install Software - Mac

Python 3.x software

https://www.python.org/downloads/mac-osx/

Editor 'Pycharm' Community Edition

https://www.jetbrains.com/pycharm/download/#section=mac
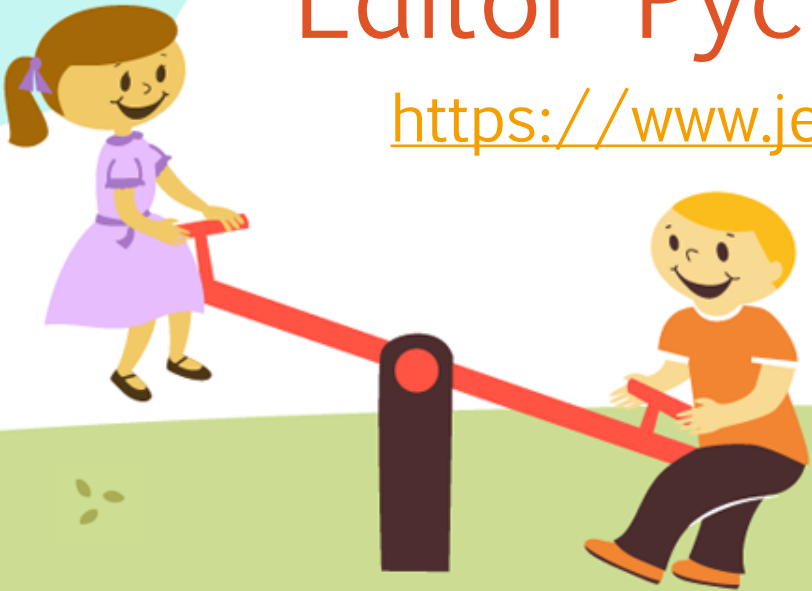
Install Software – Linux

Python 3.x software
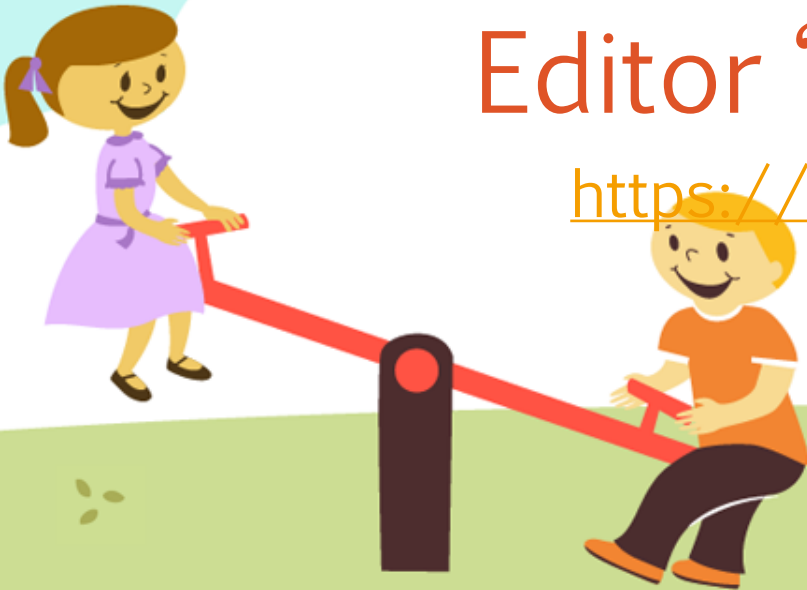
Open terminal and run below commands

sudo apt update

sudo apt-get install python3

Editor 'Pycharm' Community Edition

https://www.jetbrains.com/pycharm/download/#section=linux

Session 2: Agenda

- Hello World

- Comments
  - # single line
  - ”””” multiple line ”””””

- String format

- Variable

HOME WORK

- Create new project 'HW-session-2'

- Create new file 'HW.py'.

- Write your own creative statement and assign to variable.

- Print the variable

Session 3: Agenda

- User input
  - Input
- Variable types
  - Int
  - Float
  - String
  - Boolean
- Array or List

HOME WORK

- Create new project 'HW-session-3'

- Create file 'HW.py'

- Copy below code to HW.py & explain why print statement works or fail with an error
  - num1 = 10
  - num2 = 20
  - float1 = 10.99
  - string1 = "hello world"
  - print (num1 + num2)
  - print (num1 + float1)
  - print (num1 + string1)
  - print (float1 + string1)

- Explain the output

Session 4: Agenda

- Basic Operators
  - Add, subtract, multiply, division
  - Square, cube

- Conditional statement
  - If
  - if   else
  - If   else-if 'elif'   else

HOME WORK

- Create new project ' HW-session-4'

- Create file 'HW.py'

- Ask for user input
  - number 1. Tip: input("Enter number 1: ")
  - number 2. Tip: input("Enter number 2: ")

- Copy the below code & explain the answers
  - print('num1 + num2 = ', num1 + num2)
  - print('num1 - num2 = ', num1 - num2)
  - print('num1 * num2 = ', num1 * num2)
  - print('num1 / num2 = ', num1 / num2)

- Explain the output

Session 5: Agenda

- Loops
  - while
  - for
- Functions

HOME WORK

- Create new project ' HW-session-5'

- Create file 'HW.py'

- Create 1 function 'calculator' with 3 arguments: num1, num2, operator

- Call function with add '+', subtract '-', multiply '*', division '\' using multiple if elif else statement

Session 6: Agenda

- Comparison Operators
  - <, >, <=, >=, ==, !=

- Boolean Operators
  - and, or, not, in, not in, is, is not

- Operator Precedence

HOME WORK

- NO assignment

Session 7: Agenda

- Ternary

- Function returns value

- String functions
  - split
  - join

HOME WORK

- Create new project ' HW-session-7'

- Create file 'HW.py'

- Create multiple functions (add, subtract, multiply, division) returns value

- Create main function 'calculator', based on operator, call other function.
  - TIP: extension to HW-session-5

Session 8: Agenda

- Numeric functions
  - int
  - Ceil
  - floor
  - fabs
  - Factorial
- Set
- Set vs List

HOME WORK

- Create new project ' HW-session-8'

- Create file 'HW.py'

- Create set with multiple string.
  - Tip: myset = {'orange', 'apple', 'pear', 'banana', 'kiwi', 'pineapple', 'apple'}
  - Iterate using 'for' loop

- Create set with multiple string.
  - Tip: mylist = ['orange', 'apple', 'pear', 'banana', 'kiwi', 'pineapple', 'apple']
  - Iterate using loops: while & for

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Session 9: Agenda

- File I/O
  - open
  - read
  - write
- Class

HOME WORK

- Create new project ' HW-session-9'

- Create file 'HW.py'

- Create class

- Create calculator functions: add, subtract, multiply, division

- Call calculator functions

Session 10: Agenda

- code at https://github.com/krishnamanchikalapudi/examples.py/tree/develop/PythonTutor

- YouTube Playlist https://www.youtube.com/playlist?list=PLtobMJJSHuiYxBjlKz1jqfLrDs9ovYn51

- Samples
  - Rolling the dice
  - Draw: square, rectangle, circle
  - Fibonacci
  - Prime number
  - swap values

Thank you