Introduction to Programming: Python

By Odin Outsourcing

Motivational video

1. [Coding is not difficult](#)
2. [How to Learn Python Tutorial - Easy & simple! Learn How to Learn Python!](#)
3. [Learn Python - Full Course for Beginners [Tutorial]](#)

What did we learn in the previous class?

1. Flow Chart
2. Print value (integer, float, string)
3. Use Python as a calculator
4. Variable and Value
5. Visualization: variable and value

Variable Type

1. var = 4   # type(var)
2. var = 4.5   # type(var)
3. var = 'Odin'   # type(var)
4. var = 4+11   # type(var)
5. var = 4.75+81   # type(var)
6. var = '4' + '5'   # type(var)

Practice Problem

1. Find BMI (Body Mass Index) where weight (w) and height (h) are given.

BMI Calculation
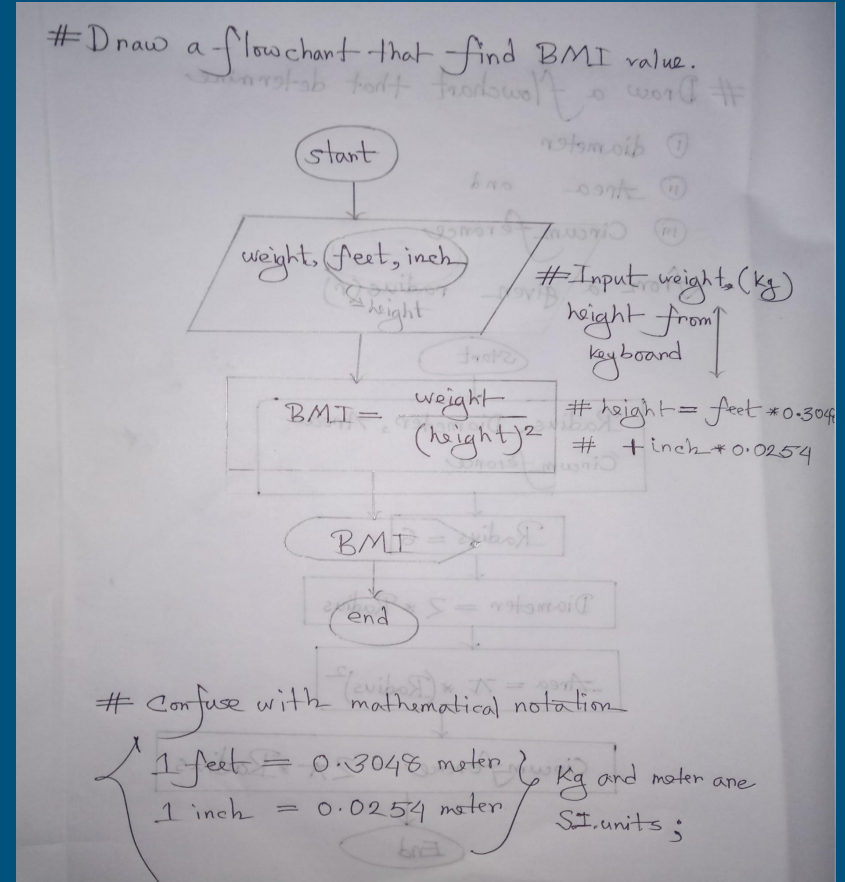
weight = float(input()) # kg

feet   = float(input())   # feet

inch   = float(input())   # inch

height = (feet * 0.3048) + (inch * 0.0254)

BMI = weight / (height**2.0)

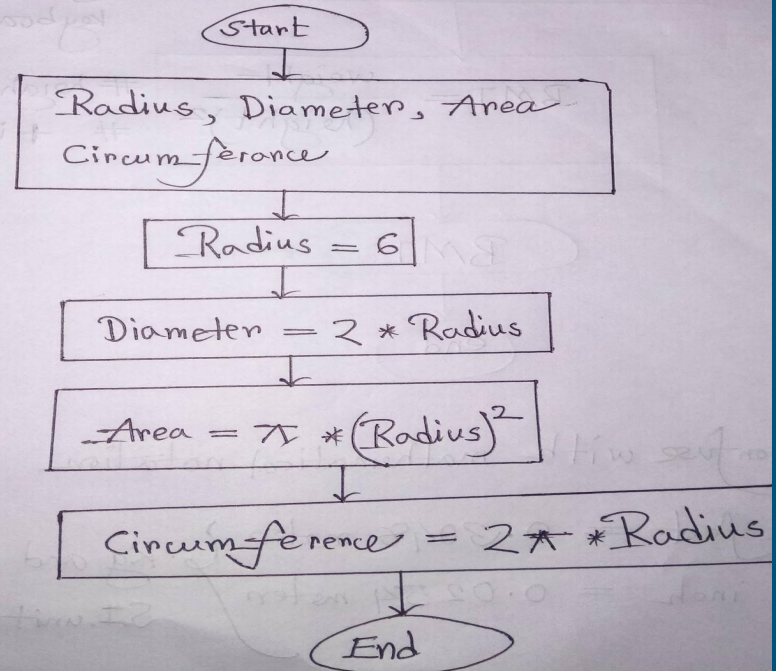print('You BMI is: {}'.format(BMI))

Circle Property

Draw a flowchart that determine
(i) diameter
(ii) Area and
(iii) Circumference
from a given radius (r)

Start

Radius, Diameter, Area Circumference

Radius = 6

Diameter = 2 * Radius

Area = π * (Radius)^2

Circumference = 2π * Radius

End

Types of Operator (1)

Operator: https://www.tutorialspoint.com/python/python_basic_operators.htm

Practice (Compare **):**

1. print(5>6)
2. print(5>=5)
3. print(51<=6)
4. print(5==6)
5. print(5!=6)
6. print(5<6)

Types of Operator (2)

4. v = 4

    print(2<v<9)

5. v = 2

    print(2<=v<9)

6. v = 2

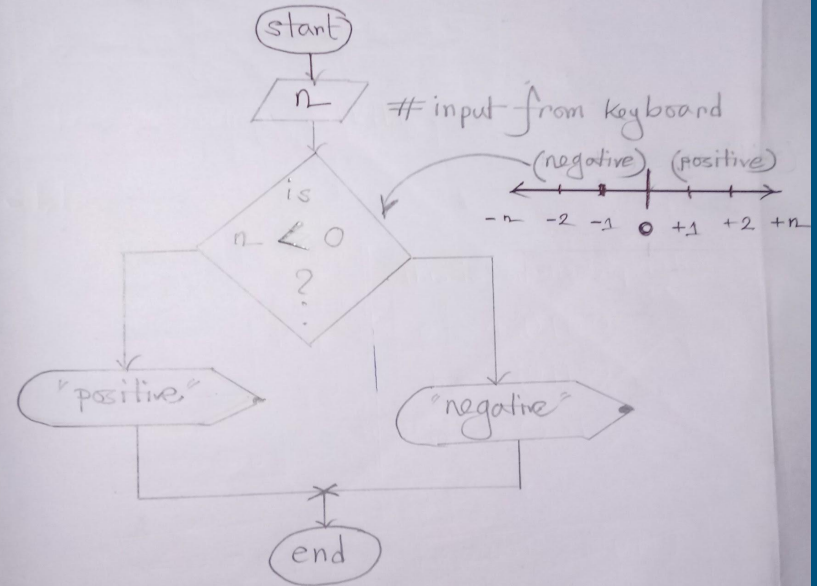   print(2<v<=9)

Types of Operator (3)

Practice (Logical **):**

1. print((5!=6) && (6==5))
2. print((5!=6) || (6==5))
3. print((5==6) || (6==5))

p	q	p∧q
T	T	T
T	F	F
F	T	F
F	F	F

p	q	p∨q
T	T	T
T	F	T
F	T	T
F	F	F

Conditional-1

Conditional-2
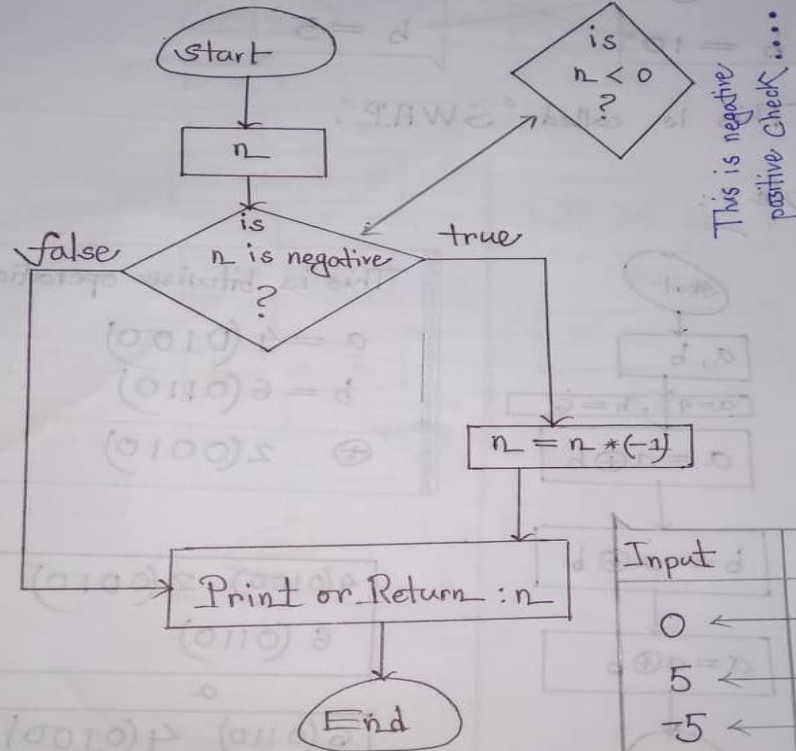
Practice / Assignment

1. Determine a number whether it is odd or even.
2. Find leap year from a given year.
3. Fizz-Buzz (If a number is divided by both 3 and 5 is called "fizz-buzz", but a number is only divided by only 3 is called "fizz" and a number is only divided by 5 is called "buzz". Otherwise is "None".)
4. Input a number, check whether it is positive or negative.
5. Input a number, print the absolute value of that number.
6. Input two numbers, tell which one is greater.
7. Input two numbers, tell which one is less.
8. Input three numbers, tell which one is greater.
9. Input three numbers, tell which one is less.

Practice / Assignment

10. Input a character, determine whether it is vowel or not.

11. Coin Change [Easy Greedy]

Contract your instructor!

Find Me: http://rafsanjani.pythonanywhere.com/contact

Course Website: https://mrzresearcharena.github.io/Big-Data-using-Python

Thank you!