Installing Python

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

Download Anaconda

https://www.anaconda.com/download/

Download Visual Code

https://code.visualstudio.com/download

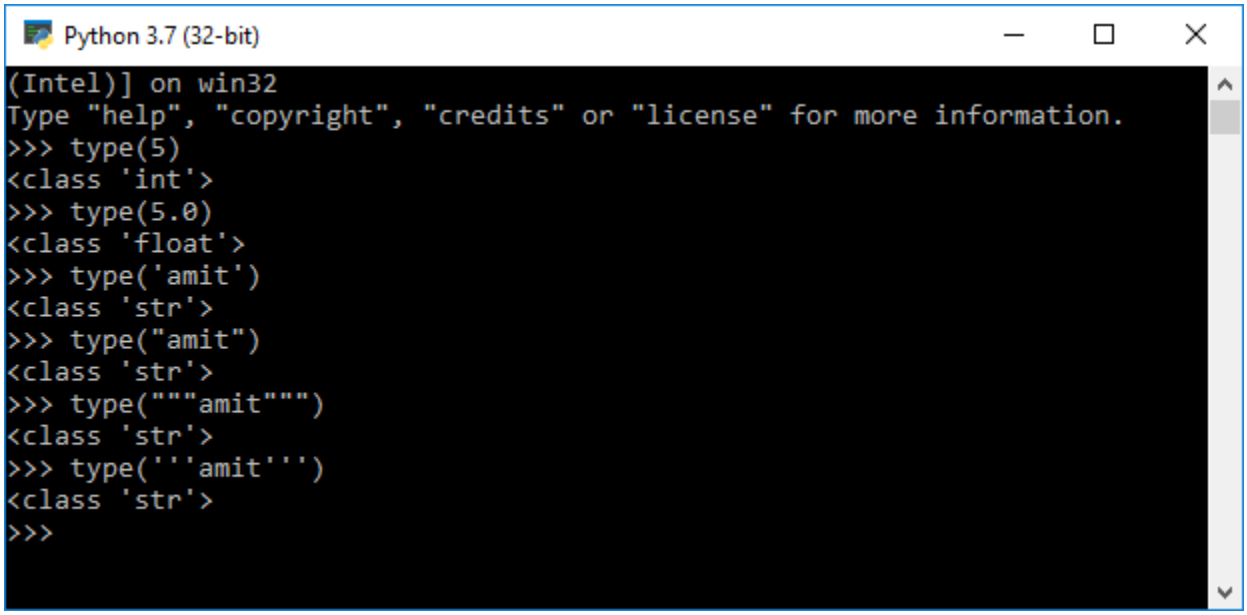
Python has two version

- 2.7
- 3.x

Basic Points in Python

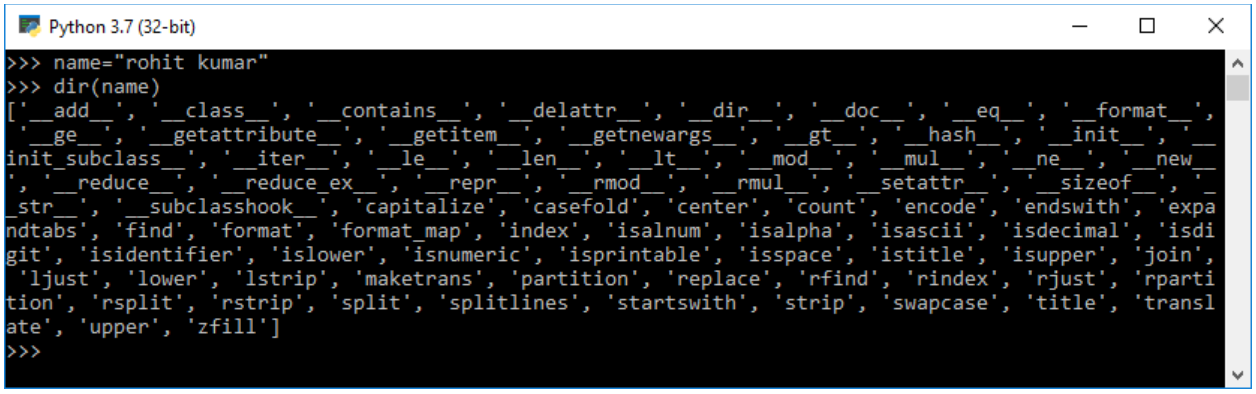
No specific data type, but internally maintained

a. Use **type()** function to get data type of some value

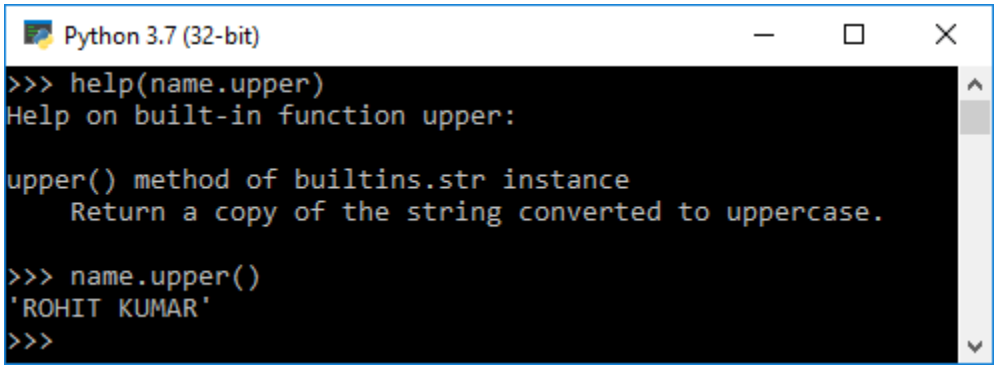


Use **dir()** function to get list of possible functions on an item. Functions can be of two types

- Special functions or dunders
- General functions



Use **help()** to know the syntax and usage of a function



Getting data input using **input()** function. Returns the data a string.

Syntax

input()

input(message)

Conversion functions

- int()
- float()
- str()

Note: Python is based on REPL (Read-Eval-Print-Loop). Python is interpreted.

Printing some data using print() function. One space is automatically added.

Syntax

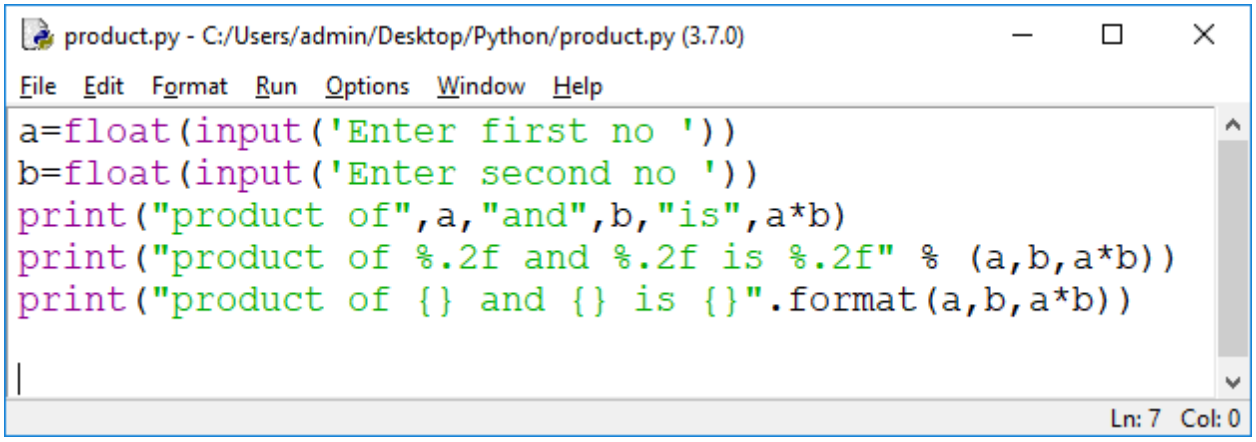
print(x,y,z)

print("formatted string" % (x,y,z))

Test Case

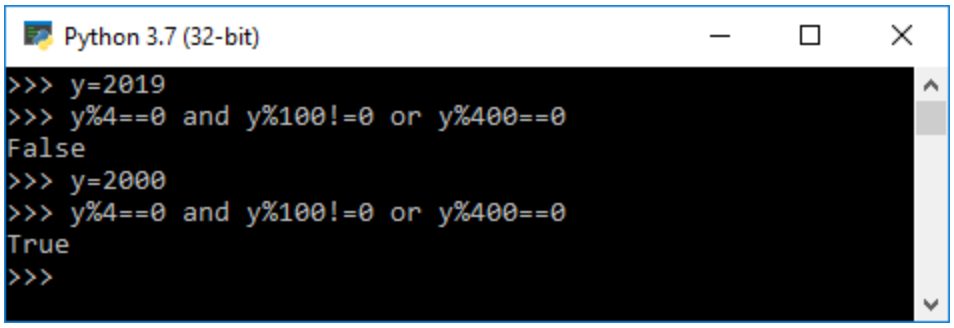
WAP to input two numbers and show product of those numbers.

Note: Use IDLE and save file as product.py



Operators in Python

1. Arithmetic
    a. +
    b. –
    c. *
    d. %
    e. / division
    f. // floor division or integer division
    g. **
2. Relational. Returns True or False
    a. ==
    b. !=
    c. >
    d. >=
    e. <
    f. <=
3. Logical
    a. and
    b. or
    c. not
4. Bitwise
    a. & bitwise and
    b. | bitwise or
    c. ^ bitwise xor
    d. ~ bitwise not – add 1 and change the sign bit
    e. << left shift … multiplied by 2
    f. >> right shift … divide by 2 e.g. 50>>3=6

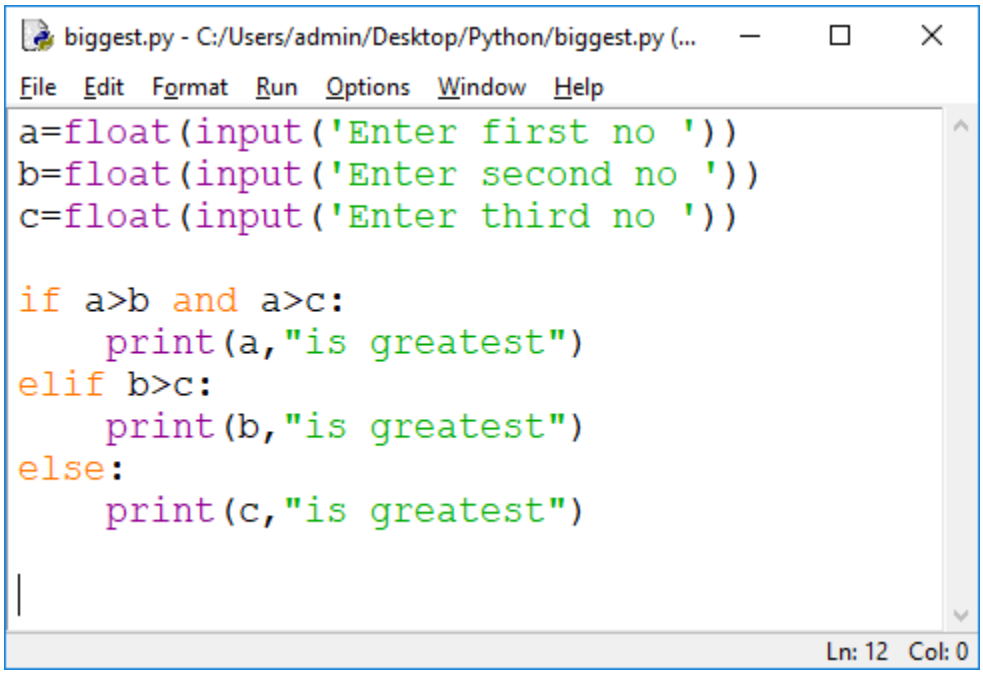


Using if for conditional statements

- Use colon (:) with indentation of 4 spaces
- Use if-elif for ladder

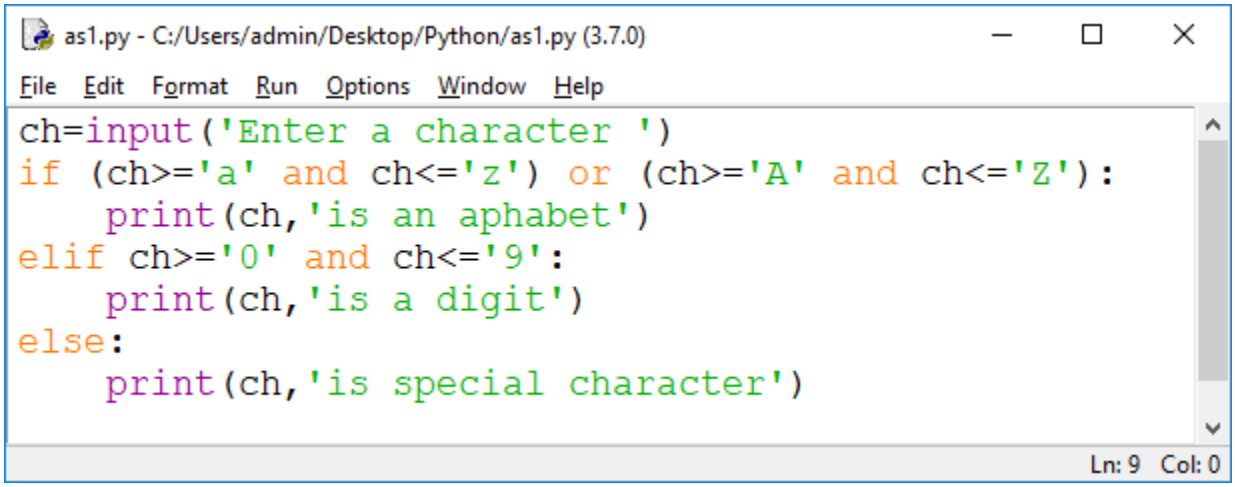
Example

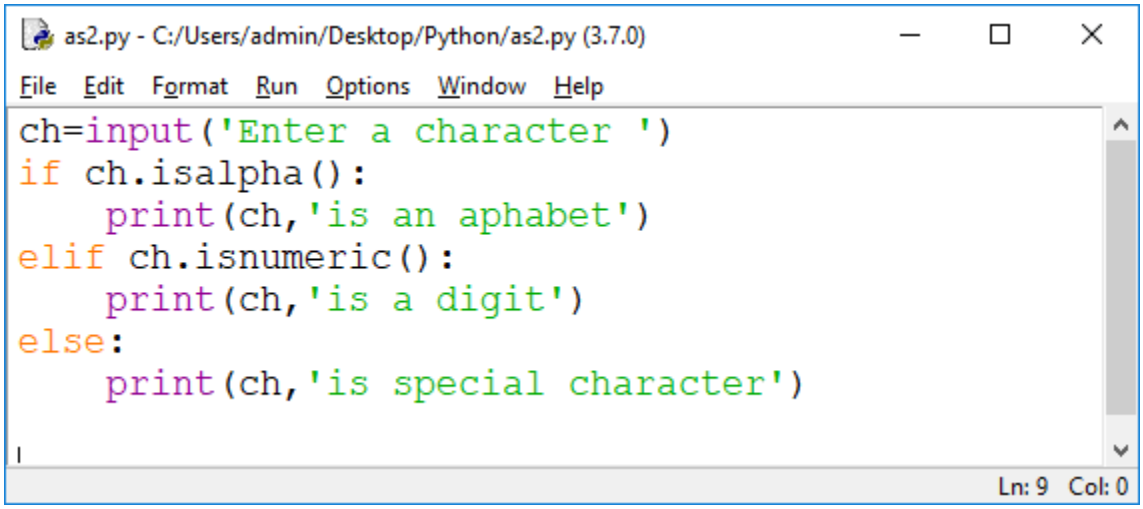
WAP to input three numbers and show the biggest no



Assignment

WAP to input a character and check it to be alphabet, digit or special character.





Looping Statements

1. while
2. for

Syntax of while

while condition:

    statements

Use break statement to come out of loop.

Home Assignments

1. WAP to input a three digit number and show the number on 10^{th} position
2. WAP to input a year and check it to be leap year
3. WAP to input a character and check it to be vowel or consonant