**==> WHAT IS PYTHON?**

* Python is a dynamically typed general purpose programming language that supports OOP approach as well as a functional programming approach.
* Python is an interpreted and a high-level programming language.
* It was created by Guido Van Rossum in 1989.

# ==> FEATURES OF PYTHON

* Simple and easy to understand, User Friendly
* Faster
* Best package for AI
* Extensively used in industry
* Read code line by line
* Portable
* Platform independent

# ==> Identifier

* It can be any alphabet between A to Z or a to z
* it cannot be started with any digit
* it cannot be started with any special character except underscore( \_ )
* A keyword cannot be an identifier.

**Examples:**

a=10

print(a)

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A=20

print(A)

---------

\_abc = 100

print(\_abc)

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**==> KEYWORDS:**

* Keywrods are the restricted words in python which cannot be used as identifiers • To know the keyword -- command is: help('keywords')

# ==> SINGLE LINE STATEMENT:-

* a = 'This is my python class' [with single quotes]
* a = "This is my python class" [with double quotes]
* a = '''This is my python class''' [with triple-single quotes]

# ==> MULTIPLE LINE STATEMENT:-

a = '''This is

me'''

print(a)

# ==> DATATYPES

## 1. Numeric Datatypes

* int
* float
* complex

## 2. Sequence Datatypes

* list
* tuple
* dictionary
* string
* set

## 3. Boolean Datatypes

* True
* False

**NUMERIC DATATYPES**

a = 10

b = 10.6

c = 2+3i

print(a)

print(type(a)) # will print the datatype of a

print(id(a)) # will print the memory location of a

print(b)

print(type(b)) # will print the datatype of b

print(id(b)) # will print the memory location of b

print(c)

print(type(c)) # will print the datatype of c

print(id(c)) # will print the memory location of c

## INPUT FROM USER

num = int(input("Enter any no.: "))

print(num)

num = float(input("Enter any float no.: "))

print(num)

num = complex(input("Enter any complex no.: ")) print(num)

### # WAP to showcase usage of arithmetic operators

print("[ + ] Please enter first no. greater than second no. [ + ]") num1 = int(input("Enter first no. "))

num2 = int(input("Enter second no. "))

print(f"Addition: {num1+num2}") print(f"Subtration: {num1-num2}") print(f"Multiplication: {num1\*num2}") print(f"Division: {num1/num2}")

print(f"Floor Divison (Integer division): {num1//num2}") print(f"Modulus: {num1%num2}")

**1. Arithmetic Operator**

+ 🡪 Addition,

- 🡪 Subtraction,

\* 🡪 Multiplication,

/ 🡪 Division,

// 🡪 Floor Division,

% 🡪 Modulus,

\*\* 🡪 Exponential .

**Eg. 1.**

a = 10

b = 20

c = a+b

print(c)

**Eg. 2.**

a = 10

b = 5

c = a-c

print(c)

**Eg. 3.**

a = 10

b = 2

c = a\*b

print(C)

**Eg. 4.**

a = 10

b = 3

c = a/b

print(C)

**Eg. 5.**

a = 20

b = 5

c = a//b

print(C)

**Eg. 6.**

a = 15

b = 2

c = a%b

print(C)

**Eg. 7.**

a = 4

b = 2

c = a\*\*b

print(C)

**2. COMPARISION OPERATOR**

== 🡪 Comparision

> 🡪 Greater then

< 🡪 Less then

**Eg. 1.**

a = 10

b = 20

print(a==b) -- False

**Eg. 2.**

a = 20

b = 10

print(a>b) -- True

print(a<b) -- False

print(a!=b) -- True

**Eg. 3.**

a = 10

b = 2

print(a>=b) -- True

print(a<=b) -- False

**==> LOGICAL OPERATOR**

and , or , not

**NOT operator:**

print(not(True)) -- False

print(not(False)) -- True

print(not(1)) -- False

print(not(0)) -- True

print(not(10)) -- False

print(not(-10)) – False

**AND operator:**

print(True and True) -- True

print(True and False) -- False

print(False and True) -- False

print(False and False) -- False

print(10 and 10) -- 10

print(0 and 0) -- 0

print(1 and 0) -- 0

print(-10 and -10) -- -10

print(1 and 1) -- 1

print(10 and 20) -- 20

print(20 and 10) -- 10

**OR operator**

print(True or True) -- True

print(True or False) -- True

print(False or True) -- True

print(False or False) -- False

print(10 or 10) -- 10

print(0 or 0) -- 0

print(1 or 0) -- 1

print(-10 or -10) -- -10

print(1 or 1) -- 1

print(10 or 20) -- 10

print(20 or 10) – 20

**==>Assignment Operator**

a = 20

a += 10 --> a = 20 + 10 = 30

a -= 10 --> a = 20 - 10 = 10

a \*= 10 --> a = 20 \* 10 = 200

a /= 10 --> a = 20 / 10 = 2

a //= 10 --> a = 20 // 10 = 2

a %= 10 --> a = 20 % 10 = 0

**==> MEMBERSHIP OPERATOR**

In, not in, is, not is

**in 🡪 IN Keyword**

**eg.**

a = "This is my Python class"

print('This' in a) -- True

print('y' in a) -- True

**not in 🡪 NOT IN Keyword**

**eg.**

a = "This is my Python class"

print('This' not in a) -- False

print('f' not in a) -- True

**is 🡪 IS Keyword**

a = "This is my python class"

print("This" is a) -- False

a = "This is my python class"

print("This is my python class" is a) -- True

c = "This"

print('This' is c) -- True

print("This" is not c) -- False