# EXPERIMENT NO : 1

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**Basic Data types, Operators, Expressions and Input Output Statement**

# Aim:-To study about Basic data types, Operators, expressions and

**. Input Output Statements In Python.**

THEORY:

***OUTPUT:***

Python 3.11.1 (tags/v3.11.1:a7a450f, Dec 6 2022, 19:58:39) [MSC v.1934 64 bit (AMD64)] on win32 Type "help", "copyright", "credits" or "license()" for more information.

# AKASH R YADAV ID.NO:VU4F2122016 DATE: 16/01/2023

***# DATA\_TYPE -> NUMBER:***

***#NUMBER:->INTEGER,->FLOAT,->COMPLEX***

***#1)NUMBER***

#INTEGER

>>> Y=15

>>> print(type(x))

<class 'int'>

## #FLOAT

>>> Y=11.45

>>> print(type(x))

<class 'float'>

### #COMPLEX

>>> Y=5+21j

print(type(x))

<class 'complex'> ***#2)SEQUENCE TYPE #LIST***

>>> x=[3,15,10,7]

>>> print(type(x))

<class 'list'>

### #TUPLE

>>> x=(4,7,3,2,5)

>>> print(type(x))

<class 'tuple'>

## #3)BOOLEAN

>>> y=true print(type(y))

<class 'bool'>

## #4)SET

>>> y = {"viram", "raju", "akash"}

>>> print(type(y))

<class 'set'>

## #5)DICTIONARY

>>> x = {"name" : "AKASH", "age" : 19}

>>> print(type(x))

<class 'dict'>

# #Python Arithmetic Operators

***#1. Addition Operator*** : In Python, + is the addition operator. It is used to add 2 values. v1=23

v2=43

v=v1+v2 print(v) 66

***#2. Subtraction Operator*** : In Python, – is the subtraction operator. It is used to subtract the second value from the first value

v=v1-v2 print(v)

-20

***#3.Multiplication Operator*** : In Python, \* is the multiplication operator. It is used to find the product of 2 values.

V1=67 V2=34

print(V1\*V2) 2278

***#3. Division Operator*** : In Python, / is the division operator. It is used to find the quotient when first operand is divided by the second.

print(V1/V2) 1.9705882352941178

***#5. Modulus Operator :*** In Python, % is the modulus operator. It is used to find the remainder when first operand is divided by the second.

print(V1%V2) 33

***#6. Exponentiation Operator*** : In Python, \*\* is the exponentiation operator. It is used to raise the first operand to power of second.

print(V1\*\*V2)

122051547946915276501139298573834221091215046641684146917022729

***#7. Floor division*** : In Python, // is used to conduct the floor division. It is used to find the floor of the quotient when first operand is divided by the second.

print(V1//V2) 1

# Python program to

## # demonstrate numeric value

A=5

print("TYPE OF A:",type(A)) TYPE OF A: <class 'int'>

A=5.5

print("TYPE OF A:",type(A)) TYPE OF A: <class 'float'>

B="AKASH YADAV"

print("TYPE OF B",type(B)) TYPE OF B <class 'str'>

C="m”

print("TYPE OF C",type(C)) TYPE OF C <class 'str'>

D=2+8j

print("TYPE OF C",type(D)) TYPE OF C <class 'complex'>

E=3+4j

F=4+5j

print(E+F) (7+9j)

print(E\*F) (-8+31j)

print(E-F) (-1-1j)

***# expressions /Sequence Type***

#In Python, sequence is the ordered collection of similar or different data types. Sequences allows to store multiple values in an organized and efficient fashion. There are several sequence types in Python –

#-> String #-> List

#-> Tuple

# Python Program for # Creation of String

# Creating a String

# with single Quotes

STRING='WELCOME TO PVPPCOE'

print("STRING WITH USE OF SINGLE Quotes :",STRING)

STRING WITH USE OF SINGLE Quotes : WELCOME TO PVPPCOE

STRING="WELCOME TO PYTHON LAB"

print("STRING WITH USE OF DOUBLE Quotes:",STRING)

STRING WITH USE OF DOUBLE Quotes: WELCOME TO PYTHON LAB

# Python Program to Access

**# characters of String**

STRING="AKASH YADAV"

print(STRING) AKASH YADAV

print("\nFirst character of String is: ",STRING[0])

First character of String is: A

>>> S="AKASH\_YADAV"

>>> print("\n LAST CHARACTER OF STRING IS:",S[-1])

LAST CHARACTER OF STRING IS: V

>>>

>>> print("\n 2nd LAST CHARACTER OF STRING IS:",S[-2])

2nd LAST CHARACTER OF STRING IS: A

>>> print("\n FIRST & LAST CHARACTER OF STRING IS:",S[1],S[-1])

FIRST & LAST CHARACTER OF STRING IS: K V

>>> print("\n FIRST & LAST CHARACTER OF STRING IS:",S[0],S[-1])

FIRST & LAST CHARACTER OF STRING IS: A V

>>>

>>> # Python3 program to show the

... # working of upper() function

...

... # upper() function to convert

... # string to upper case

...

>>> STRING="akash is live in mumbai"

>>> print("\n CONVERTED STRING IS:",STRING.upper())

CONVERTED STRING IS: AKASH IS LIVE IN MUMBAI

>>>

>>> # lower() function to convert

... # string to lower case

>>>

CONVERTED STRING IS: WHAT ARE YOU DOING!

>>> STRING= "WHAT ARE YOU DOING!"

>>> print("\n CONVERTED STRING IS:",STRING.lower())

CONVERTED STRING IS: what are you doing!