EXPERIMENT NO:1

Basic Data types, Operators, Expressions and Input Output Statement

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BATCH: A BRANCH: IT DIV: A

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.

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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)

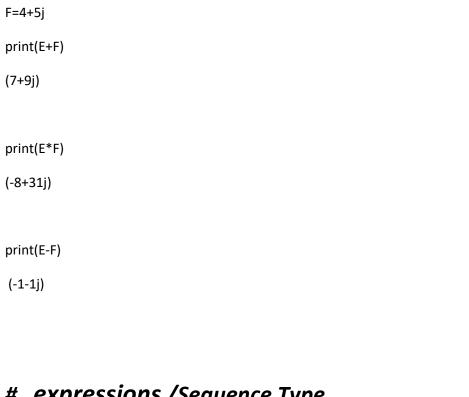
122051547946915276501139298573834221091215046641684146917022729

#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)
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



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 –

```
#-> List
#-> Tuple
# Python Program for
# Creation of String
```

#-> 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!
```