EXPERIMENT NO : 1

Basic Data types, Operators, Expressions and Input Output Statement

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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)

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!
```