DataTypes

In [1]:
```
s1="shivesh" #string
```

In [2]:
```
s1='''shivesh''' #it is also known as comment but if we'll asssign it after variable t
```

In [3]:
```
s1='shivu' #string in single quote we can also write it
```

In [4]:
```
i1=10 #integer
```

In [5]:
```
f1=10.3 #float
```

In [6]:
```
b1=True
```

In [7]:
```
n1=None
```

checking

In [8]:
```
type(s1)
```

Out[8]:
```
str
```

In [9]:
```
type(i1)
```

Out[9]:
```
int
```

In [10]:
```
type(f1)
```

Out[10]:
```
float
```

In [11]:
```
type(b1)
```

Out[11]:
```
bool
```

In [12]:
```
type(n1)
```

Out[12]:
```
NoneType
```

Arithmetic program

In [13]:
```
a=3
b=4
```

In [14]:
```
print("my name is w",a+b)
```

```
my name is w 7
```

In [15]:
```
print("my name is w",3+4)
```

```
my name is w 7
```

In [16]:
```
print("my name is w",3*4)
```

```
my name is w 12
```

Assignment operator

In [17]:
```
a=10
a+=5
```

In [18]:
```
print(a)
```

```
15
```

In [19]:
```
a1=10
a1+=5
a1*=5
a1/=5
```

In [20]:
```
print(a1)
```

```
15.0
```

Comparison operator

In [21]:
```
b=4>7
```

In [22]:
```
print(b)
```

```
False
```

In [23]:
```
b1=4<7
```

In [24]:
```
b1
```

Out[24]:
```
True
```

In [25]:
```
b=4==7
```

In [26]:
```
print(b)
```

```
False
```

Logical operators

In [27]:
```
bool1=True
bool2=False
```

In [28]:
```
print("value of bool1 and bool2",(bool1 and bool2))
```

```
value of bool1 and bool2 False
```

In [29]:
```
print("value of bool1 and bool2",(bool1 or bool2))
```

```
value of bool1 and bool2 True
```

In [30]:
```
print("value of bool1 and bool2",(not bool2))
```

```
value of bool1 and bool2 True
```

Typecasting

In [31]:
```
a="30" # this is string not integer becz it's under double quote
a1=int(a)
```

In [32]:
```
print(a1+5)
```

```
35
```

In [33]:
```
type(a)
```

Out[33]:
```
str
```

In [34]:
```
type(a1) # here it converted into integer
```

Out[34]:
```
int
```

In [35]:
```
asd=34 #integer
```

In [36]:
```
asd=str(asd) #converting into str
```

In [37]:
```
type(asd)
```

Out[37]:
```
str
```

Input function

very interesting function

In [40]:
```
nm=input("enter your name")
```

```
enter your nameShivesh Kumar
```

STRINGS

In [41]:
```
a=20
b="shivu"
```

```
print(a,b)
```

```
20 shivu
```

string slicing

In [44]:
```
 b[0]
```

Out[44]:
```
's'
```

In [46]:
```
b[0:6]
```

Out[46]:
```
'shivu'
```

In [51]:
```
b[-1]
```

Out[51]:
```
'u'
```

concating twon string

In [50]:
```
s11="hello shivesh "
s22="how are you"
print(s11+s22)
```

```
hello shivesh how are you
```

In [68]:
```
story="my name is shivesh and i'm learning python is"
```

In [69]:
```
len(story)
```

Out[69]:
```
45
```

In [70]:
```
story.endswith("rty")
```

Out[70]:
```
False
```

In [71]:
```
story.endswith("python")
```

Out[71]:
```
False
```

In [73]:
```
story.count('is')
```

Out[73]:
```
2
```

In [74]:
```
story.capitalize()
```

Out[74]:
```
"My name is shivesh and i'm learning python is"
```

In [75]:
```
story.find("shivesh")
```

Out[75]:
```
11
```

In [76]:
```
story.replace("shivesh","shivu")
```

Out[76]:
```
"my name is shivu and i'm learning python is"
```

List and Tupple

In [78]:
```
list1 = [1,2,"shivu",23,5,6,7,7865,46]
```

In [90]:
```
list1
```

Out[90]:
```
[1, 2, 5, 6, 7, 10, 23, 46, 7865]
```

In [81]:
```
list1[2]=10
```

In [83]:
```
list1 #it replaced "shivu" with 10 because shivu was at 2 position
```

Out[83]:
```
[1, 2, 10, 23, 5, 6, 7, 7865, 46]
```

In [84]:
```
tupple= (1,2,3,"shivu","love")
```

In [85]:
```
tupple
```

Out[85]:
```
(1, 2, 3, 'shivu', 'love')
```

In [87]:
```
tupple[1]="once" #tuple is imutable we can change
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
~\AppData\Local\Temp\ipykernel_17544\3807822741.py in <module>
----> 1 tupple[1]="once" #tuple is imutable we can change

TypeError: 'tuple' object does not support item assignment
```

In [88]:
```
tupple.sort()
```

```
---------------------------------------------------------------------------
AttributeError                            Traceback (most recent call last)
~\AppData\Local\Temp\ipykernel_17544\1088710474.py in <module>
----> 1 tupple.sort()

AttributeError: 'tuple' object has no attribute 'sort'
```

In [99]:
```
tup=(1,)
tup             #to make a single tuple use comma in last
```

Out[99]:
```
(1,)
```

In [106…
```
tupple.count(1) # how may times 1 is in tupple
```

Out[106]:
```
1
```

Dictionay and sets

In [110…
```
dic={'name':'shivesh',
     'college':'doon business school',
     'course':'PGDM'}
```

In [114…
```
dic['name']
```

Out[114]:
```
'shivesh'
```

In [126…
```
dic={'name':'shivesh',
     'college':'doon business school',
     'course':'PGDM',
     'new_dic':{'location': 'DBS Hostel'}
    }
```

In [133…
```
#we can also make nested dictionary
```

In [134…
```
st={1,2,3,"shivu"}
```

In [135…
```
print(st)
```

```
{1, 2, 3, 'shivu'}
```

In [136…
```
st.add(10)
```

In [137…
```
st
```

Out[137]:
```
{1, 10, 2, 3, 'shivu'}
```

conditional expression

In [147…
```
if(1<5):
    print("yes")
else:
    print("no")
```

```
yes
```

In [153…
```
if(1>5):
    print("yes")
else:
   print( "no")
```

```
no
```

In [157…
```
c1=1000
if(c1==1):
    print("yes")
elif(c1==20):
    print("no")
else:
     print("hahahhaha")
```

```
hahahhaha
```

In [171…
```
age=20
if age>17:
    print("yes,you are greater than 18")
else:
    print("oops! sorry you are not")
```

```
yes,you are greater than 18
```

Looping

while loop

In [1]:
```
i=0
while i<10:
    print("yes")
    i=i+1
```

```
yes
yes
yes
yes
yes
yes
yes
yes
yes
yes
```

In [4]:
```
i=0
while i<10:
    print("SHIVESH " + str(i))
    i=i+1
```

```
SHIVESH 0
SHIVESH 1
SHIVESH 2
SHIVESH 3
SHIVESH 4
SHIVESH 5
SHIVESH 6
SHIVESH 7
SHIVESH 8
SHIVESH 9
```

In [5]:
```
i=0
while i<10:
    print("SHIVESH " + str(i))
    i=i+1
print("Done")
```

```
SHIVESH 0
SHIVESH 1
SHIVESH 2
SHIVESH 3
SHIVESH 4
SHIVESH 5
SHIVESH 6
SHIVESH 7
SHIVESH 8
SHIVESH 9
Done
```

In [9]:

```
i=1
while i<=50:
    print(i)
    i=i+1
```

```
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
```

for loop

In [13]:
```
l=[1,7,8,9]
for item in l:
    print(item)
```

```
1
7
8
9
```

In [20]:
```
for i in range(10):
    print(i)
    if i==5:
        break
```

```
0
1
2
3
4
5
```

functions

In [25]:
```
def shivu ():
    print("shivesh")
```

In [27]:
```
shivu()
```

```
shivesh
```

In [36]:
```
def greet(name):
    print("good day,"+ name)
```

In [37]:
```
greet("shivesh")
```

```
good day,shivesh
```