Datatypes

In [4]:

```
a=10
print(type(a))
```

```
<class 'int'>
```

In [5]:

```
a="Hello"
print(type(a))
```

```
<class 'str'>
```

In [6]:

```
a=True
print(type(a))
```

```
<class 'bool'>
```

In [7]:

```
a=20.34
print(type(a))
```

```
<class 'float'>
```

Variable

In [10]:

```
a=10
print(a)
```

```
10
```

Arithmetic Operator

In [12]:

```
a=10
b=20
a+b
```

Out[12]:

```
30
```

In [13]:

```
a-b
```

Out[13]:

```
-10
```

In [14]:

```
a*b
```

Out[14]:

```
200
```

In [15]:

```
a/b
```

Out[15]:

```
0.5
```

In [16]:

```
a%b
```

Out[16]:

```
10
```

In [18]:

```
b**a
```

Out[18]:

```
10240000000000
```

In [19]:

```
b//a
```

Out[19]:

```
2
```

Comparision/Relational Operator

In [20]:

```
a>b
```

Out[20]:

```
False
```

In [21]:

```
a<b
```

Out[21]:

```
True
```

In [23]:

```
c=10
a>=c
```

Out[23]:

```
True
```

In [24]:

```
d=20
b<=d
```

Out[24]:

```
True
```

In [25]:

```
a!=b
```

Out[25]:

```
True
```

logical Operator

In [26]:

```
a and b
```

Out[26]:

```
20
```

In [27]:

```
a or b
```

Out[27]:

```
10
```

In [29]:

```
not a
```

Out[29]:

```
False
```

conditional statement

In [30]:

```
#if stmt
x=10
y=20
if(x>y):
    print("x is greater than y")
```

```
y is greater than x
```

In [31]:

```
#if else stmt
if(x>y):
    print("x is greater than y")
else:
    print("y is greater than x")
```

```
y is greater than x
```

In [ ]:

```
#elif stmt
a=10,b=20,c=30
if(a>b && a>c):
    print("a is greater")
elif (b>a && b>c):
    print("b is greater")
else:
    print("c is greater")
```

looping stmt

In [33]:

```
#for loop
for i in range(1,11):
    print(i)
```

```
1
2
3
4
5
6
7
8
9
10
```

In [ ]:

```
#while loop
i = 1
while i < 6:
  print(i)
  i += 1
```

Data Structures in Python

In [1]:

```
#list
l=[1,2,3]
type(l)
```

Out[1]:

```
list
```

In [3]:

```
l.append(4)
l
```

Out[3]:

```
[1, 2, 3, 4, 4]
```

In [8]:

```
l.insert(4,[5,6])
l
```

Out[8]:

```
[1, 2, 3, 4, [5, 6], 4]
```

In [11]:

```
l.remove(4)
l
```

Out[11]:

```
[1, 2, 3, [5, 6]]
```

In [12]:

```
del l
l
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
<ipython-input-12-5aaa9a186d4b> in <module>
      1 del l
----> 2 l

NameError: name 'l' is not defined
```

In [13]:

```
#Dict
d={'Name':'Pratiksha',
  'Roll_no':14}
d
```

Out[13]:

```
{'Name': 'Pratiksha', 'Roll_no': 14}
```

In [26]:

```
d['Class']='BE'
d
```

Out[26]:

```
{'Name': 'Pratiksha', 'Roll_no': 14, 'Class': 'BE'}
```

In [27]:

```
d.update({'M1':19,'M2':20})
d
```

Out[27]:

```
{'Name': 'Pratiksha', 'Roll_no': 14, 'Class': 'BE', 'M1': 19, 'M2': 20}
```

In [32]:

```
del d['Class']
```

```
---------------------------------------------------------------------------
KeyError                                  Traceback (most recent call last)
<ipython-input-32-67e7a0ada379> in <module>
----> 1 del d['Class']

KeyError: 'Class'
```

In [31]:

```
d
```

Out[31]:

```
{'Name': 'Pratiksha', 'Roll_no': 14, 'M1': 19, 'M2': 20}
```

In [33]:

```
del d
```

In [34]:

```
d
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
<ipython-input-34-e983f374794d> in <module>
----> 1 d

NameError: name 'd' is not defined
```

built in function

In [35]:

```
min(1,2,3)
```

Out[35]:

```
1
```

In [36]:

```
max(1,2,3)
```

Out[36]:

```
3
```

In [37]:

```
abs(-14)
```

Out[37]:

```
14
```

In [42]:

```
l=[1,2,3,4]
```

In [46]:

```
l2=l.reverse()
l2
```