Basic ¶

In [1]:
```
x=10
y=20
```

In [2]:
```
x+y
```

Out[2]: 30

In [3]:
```
y=12.3
print(y)
```

```
12.3
```

In [4]:
```
type(y)
```

Out[4]: float

list

In [5]:
```
j1=[24,35,12,56,39,45,11]
print(j1)
```

```
[24, 35, 12, 56, 39, 45, 11]
```

In [6]:
```
type(j1)
```

Out[6]: list

In [7]:
```
print(j1[0])
```

```
24
```

In [8]:
```
j1[5]
```

Out[8]: 45

In [9]:
```
#replace the value
j1[4]=38
```

In [10]:
```
j1
```

Out[10]: [24, 35, 12, 56, 38, 45, 11]

In [11]:
```
#add new value
print(len(j1))
```

```
7
```

In [13]:
```
j1.append(70)
```

In [14]:
```
j1
```

Out[14]:
```
[24, 35, 12, 56, 38, 45, 11, 70]
```

In [16]:
```
#insert the value in the middle
j1.insert(4,40)
```

In [17]:
```
j1
```

Out[17]:
```
[24, 35, 12, 56, 40, 38, 45, 11, 70]
```

In [18]:
```
#delete the vaue
```

In [19]:
```
j1.pop()  #by default last  vallue will be removed
```

Out[19]:
```
70
```

In [20]:
```
j1
```

Out[20]:
```
[24, 35, 12, 56, 40, 38, 45, 11]
```

In [22]:
```
j1.insert(4,"cat")
```

In [23]:
```
j1
```

Out[23]:
```
[24, 35, 12, 56, 'cat', 40, 38, 45, 11]
```

In [24]:
```
j1.pop(4)
```

Out[24]:
```
'cat'
```

In [25]:
```
sum(j1)
```

Out[25]:
```
261
```

In [26]:
```
salary=[12500,14200,28300,30000,16000]
```

In [27]:
```
# calculate the average salary using pre defined words---->len and sum
```

In [28]:
```
sum(salary)/len(salary)
```

Out[28]:
```
20200.0
```

In [29]:
```
salary.sort()
```

In [30]:
```
print(salary)
```

```
[12500, 14200, 16000, 28300, 30000]
```

In [31]:
```
salary.sort(reverse=True)
```

In [32]:
```
print(salary)
```

```
[30000, 28300, 16000, 14200, 12500]
```

In [33]:
```
#create a llist under the list
j2=[[23,4,5,67,2,43],[56,78,6,8,90]]
j2
```

Out[33]:
```
[[23, 4, 5, 67, 2, 43], [56, 78, 6, 8, 90]]
```

In [36]:
```
len(j2)
```

Out[36]:
```
2
```

Tuple= tuple also can be taken all data type in one object. once it is defined again you cannot modify

In [42]:
```
t1=(24,5,6,7)
```

In [43]:
```
t1
```

Out[43]:
```
(24, 5, 6, 7)
```

In [44]:
```
type(t1)
```

Out[44]:
```
tuple
```

In [45]:
```
len(t1)
```

Out[45]:
```
4
```

In [46]:
```
t1[0]
```

Out[46]:
```
24
```

Dictionary ----> keys and values

In [48]:
```
d1={"apple":340,"orrange":230}
```

In [50]:
```
d1
```

Out[50]:
```
{'apple': 340, 'orrange': 230}
```

set---> it wont allow duplicates and sorts the data in ascending order

In [52]:
```
s1={101,102,304,504,320,105}
```

In [53]:
```
s1
```

Out[53]:
```
{101, 102, 105, 304, 320, 504}
```

In [55]:
```
s2={101,102,104,204,320,105}
```

In [60]:
```
s3=set(s2)
```

In [61]:
```
s3
```

Out[61]:
```
{101, 102, 104, 105, 204, 320}
```

In [62]:
```
s=list[s3]
```

In [63]:
```
s
```

Out[63]:
```
list[{320, 101, 102, 104, 105, 204}]
```

In [64]:
```
a=12
```

In [65]:
```
b=23
```

In [66]:
```
print(a+b)
```

```
35
```

In [67]:
```
print(a-b)
```

```
-11
```

In [69]:
```
print((a*b))
```

```
276
```

In [70]:
```
print(a/b)
```

```
0.5217391304347826
```

In [71]:
```
print(a//b)
```

```
0
```

In [72]:
```
print(a%b)
```

```
12
```

In [73]:
```
print(a**2)
```

```
144
```

In [74]:
```
#comparision operators
```

In [75]:
```
a=12
```

In [76]:
```
b=34
```

In [77]:
```
print(a==b)
```

```
False
```

In [78]:
```
print(a!=b)
```

```
True
```

In [80]:
```
print(a<b)
```

```
True
```

In [81]:
```
print(a>b)
```

```
False
```

In [82]:
```
#logical operator
```

In [85]:
```
education="degree"
```

In [86]:
```
age=24
```

In [88]:
```
education=="degree" and age>21
```

Out[88]:
```
True
```

In [89]:
```
education=="degree" or age>21
```

Out[89]:
```
True
```

In [90]:
```
age=25
```

In [91]:
```
age>21
```

Out[91]:
```
True
```

In [92]:
```
age<21
```

Out[92]:
```
False
```

In [93]:
```
not(age<21)
```

Out[93]:
```
True
```

In [95]:
```
#assiment operator
i=10
i=i+1
```

In [96]:
```
i
```

Out[96]:
```
11
```

In [100]:
```
project="data science"
```

In [101]:
```
print("you are eligible for interview")
if project=="data science":
    print("you are eligibal for interview")
else:
    print("qualification  is not suitbale")
```

```
you are eligible for interview
you are eligibal for interview
```

In [104]:
```
code="python"
course="data science"
skills="tablue"
if code=="python" and course=="data science" and skills=="tablue":
    print("you are eligible for interview")
else:
    print("qualification is not suitable")
```

```
you are eligible for interview
```

In [105]:
```
a=2024
if a%4==0:
    print("leap year")
else:
    print("not a leap year")
```

```
leap year
```

In [112]:
```
exp=float(input())
if exp>0 and exp<1:
    print("trainee")
elif exp>=1 and exp<3:
    print("eligible for data science")
elif exp>=3 and exp <5:
    print("eigible for data science")
elif exp>=5 and exp <10:
    print("eligible for sr. data scinece position")
else:
    print("eligible for manager")
```

```
2.3
eligible for data science
```

In [113]:
```
#nested if
```

In [116]:
```
pin = 1234
accounttype = "savings"
cashwithdraw = "yes"
amount = 500

if pin == 1234:
    if accounttype == "savings":
        if cashwithdraw == "yes":
            if amount > 100:
                print("transaction successfully")
            else:
                print("enter the amount minimum")
        else:
            print("select some other option")
    else:
        print("you did not select the right option")
else:
    print("invalid entry")
```

```
transaction successfully
```

In [ ]: