In [1]:
```
## For Loop
# For loop is used with either a list,Tuple set, dictionary and a string
#Range                                                    #xrange
#1. It gives output as integers                          1. it gives output as
#2. Python version 3 doesn't supports xrange()           2. Python version 2 do
#3. Range() is slower                                    3. xrange() is faster
#4. Rt keeps the entire list in memory                   4. it keeps only one e
```

In [2]:
```
car_brand=["BMW","Audi","Jaguar"]              #car_brand= BMW, Audi, Jaguar
for a in car_brand:
    print(a)
```

```
BMW
Audi
Jaguar
```

In [3]:
```
for a in "BMW":                          #car_brand= BMW, Audi, Jaguar
    print(a)
```

```
B
M
W
```

In [4]:
```
for a in range(11):
    print(a)
```

```
0
1
2
3
4
5
6
7
8
9
10
```

In [5]:
```
a=1
b=2
c=3
print(a)
print(b)
print(c)
```

```
1
2
3
```

In [6]:
```
for a in range(2, 10, 2):
    print(a)

```

```
2
4
6
8
```

In [7]:
```
car_brand=["BMW","Audi","Jaguar","Volvo","Hyndai","Chevrolet","Maruti","Kia"
for a in car_brand:
    print(a)
    if a == "Chevrolet":
        break
```

```
BMW
Audi
Jaguar
Volvo
Hyndai
Chevrolet
```

In [8]:
```
car_brand=["BMW","Audi","Jaguar","Volvo","Kia","Hyndai","Chevrolet","Maruti"
for a in car_brand:
    print(a)
    if a == "Kia":
        break
```

```
BMW
Audi
Jaguar
Volvo
Kia
```

In [9]:
```
car_brand=["BMW","Audi","Jaguar","Volvo","Hyndai","Chevrolet","Maruti","Kia"
for a in car_brand:
    if a == "Hyndai":
        continue
    print(a)
```

```
BMW
Audi
Jaguar
Volvo
Chevrolet
Maruti
Kia
MG
```

In [10]:
```
for a in range(20):
    print(a)
    if a == 15:
        break
```

```
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
```

In [11]:
```
# FOR WITH ELSE
for a in range(10):
    print(a)
else:
    print("Your list has came to an end")
```

```
0
1
2
3
4
5
6
7
8
9
Your list has came to an end
```

In [12]:
```
# FOR WITH ELSE
for a in range(10):
    if a==4:
        break
    print(a)
else:
    print("Your list has came to an end!")           # Else not support to
```

```
0
1
2
3
```

In [13]:
```
car_bran=["BMW","Audi","Jaguar"]
car_color=["Black","White","Grey"]
car_segment=["sedan","hatchbag","coupe"]
for a in car_brand:
    for b in car_color:
        for c in car_segment:
            print(a,b,c)
```

```
BMW Black sedan
BMW Black hatchbag
BMW Black coupe
BMW White sedan
BMW White hatchbag
BMW White coupe
BMW Grey sedan
BMW Grey hatchbag
BMW Grey coupe
Audi Black sedan
Audi Black hatchbag
Audi Black coupe
Audi White sedan
Audi White hatchbag
Audi White coupe
Audi Grey sedan
Audi Grey hatchbag
Audi Grey coupe
Jaguar Black sedan
Jaguar Black hatchbag
Jaguar Black coupe
Jaguar White sedan
Jaguar White hatchbag
Jaguar White coupe
Jaguar Grey sedan
Jaguar Grey hatchbag
Jaguar Grey coupe
Volvo Black sedan
Volvo Black hatchbag
Volvo Black coupe
Volvo White sedan
Volvo White hatchbag
Volvo White coupe
Volvo Grey sedan
Volvo Grey hatchbag
Volvo Grey coupe
Hyndai Black sedan
Hyndai Black hatchbag
Hyndai Black coupe
Hyndai White sedan
Hyndai White hatchbag
Hyndai White coupe
Hyndai Grey sedan
Hyndai Grey hatchbag
Hyndai Grey coupe
Chevrolet Black sedan
Chevrolet Black hatchbag
Chevrolet Black coupe
```

```
Chevrolet White sedan
Chevrolet White hatchbag
Chevrolet White coupe
Chevrolet Grey sedan
Chevrolet Grey hatchbag
Chevrolet Grey coupe
Maruti Black sedan
Maruti Black hatchbag
Maruti Black coupe
Maruti White sedan
Maruti White hatchbag
Maruti White coupe
Maruti Grey sedan
Maruti Grey hatchbag
Maruti Grey coupe
Kia Black sedan
Kia Black hatchbag
Kia Black coupe
Kia White sedan
Kia White hatchbag
Kia White coupe
Kia Grey sedan
Kia Grey hatchbag
Kia Grey coupe
MG Black sedan
MG Black hatchbag
MG Black coupe
MG White sedan
MG White hatchbag
MG White coupe
MG Grey sedan
MG Grey hatchbag
MG Grey coupe
```

In [14]:

```python
car_brand=["Kia","MG"]
car_color=["Black","White"]
for a in car_brand:
    for b in car_color:
        if a == "MG":
            break
        print(a)
```

```
Kia
Kia
```

In [15]:
```
for i in range(5):
    for j in range(3):
        if j==2 and i==0:
            break
        if j==2 and i==0:
            break
        print(i,j)
```

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

In [16]:
```
for a in range (2,10,2):
    pass
```

In [17]:
```
## WHILE LOOP

a=1                         # a=1
while a<5:                  # 4<5
    print(a)                # 1
    a +=1                   # a=1 means 1+1=2 then 2+1=3 then 3+1=4
```

```
1
2
3
4
```

In [18]:
```
a=5
while a>1:
    print(a)
    a-=1                  # it gives in reverse
```

```
5
4
3
2
```

In [19]:
```
a=1                     # a=1
while a<5:              # a<5
    print(a)            # 1
    if a==4:            # 1==4
        break           # break
    a=a+1               # 1= 1+1=2 then 2=2+1=3 again 3=3+1=4
```

```
1
2
3
4
```

In [20]:
```
a=1
while a<5:
    a=a+1
    if a==3:
        continue
    print(a)
```

```
2
4
5
```

In [21]:
```
a=1
while a<5:
    print(a)
    a=a+1
else:
    print("The loop has come to an end")
```

```
1
2
3
4
The loop has come to an end
```

In [ ]:
```

```