LOOPS IN PYTHON

```python
In [1]:  print ('data science')
         print ('data science')
         print ('data science')
         print ('data science')
         print ('data science')
```

```
data science
data science
data science
data science
data science
```

```python
In [2]:  i=1
         while i<=5:
             print('data science')
             i=i+1
```

```
data science
data science
data science
data science
data science
```

```python
In [3]:  i=5
         while i>=1:
             print ('data science')
             i=i-1
```

```
data science
data science
data science
data science
data science
```

```python
In [4]:  i=5
         while i>=1:
             print ('data science:',i)
             i=i-1
```

```
data science: 5
data science: 4
data science: 3
data science: 2
data science: 1
```

```python
In [5]:  i=1
         while i<=5:
             print('data science:',i)
             i=i+1
```

```
data science: 1
data science: 2
data science: 3
data science: 4
data science: 5
```

In [8]:
```python
i=1
while i<=5:
    print ('data science')
    j=1
    while j<=4:
        print('technology')
        j=j+1
    i=i+1
    print()
```

```
data science
technology
technology
technology
technology

data science
technology
technology
technology
technology

data science
technology
technology
technology
technology

data science
technology
technology
technology
technology

data science
technology
technology
technology
technology
```

In [12]:
```python
i=1
while i<=5:
    print ('data science:',end="")
    j=1
    while j<=4:
        print(' technology',end="")
        j=j+1
    i=i+1
    print()
```

```
data science: technology technology technology technology
data science: technology technology technology technology
data science: technology technology technology technology
data science: technology technology technology technology
data science: technology technology technology technology
```

In [14]:
```python
i=1
while i<=2:
    j=0
    while j<=2:
        print(i*j,end=" ")
        j+=1
    print()
    i+=1
```

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

In [16]:
```python
i=1
while i<=4:
    j=0
    while j<=3:
        print (i*j,end=" ")
        j+=1
    print()
    i+=1
```

```
0 1 2 3
0 2 4 6
0 3 6 9
0 4 8 12
```

In [17]:
```python
i=10
while i<=4:
    j=1
    while j<=3:
        print(i*j,end="")
        j+=1
    print()
    i+=1
else:
    print ('condition is not matched')
```

```
condition is not matched
```

Foor Loop

In [18]:
```python
name = 'sabya'
for i in name:
    print(i)
```

```
s
a
b
y
a
```

In [19]:
```python
name1=[1,4.5,'welcome']
for i in name1:
    print(i)
```

```
1
4.5
welcome
```

In [20]:
```python
range(11)
```

Out[20]: `range(0, 11)`

In [21]:
```python
for i in range(5):
    print (i)
```

```
0
1
2
3
4
```

In [22]:
```python
for i in range(10,50,5):
    print(i)
```

```
10
15
20
25
30
35
40
45
```

In [23]:
```python
#3 TABLE
for i in  range(1,31):
    if i%3==0:
        print(i)
```

```
3
6
9
12
15
18
21
24
27
30
```

BREAK , CONTINUE , PASS

In [25]:
```python
for i in range (1,11):
    print(i)
```
```
1
2
3
4
5
6
7
8
9
10
```

In [27]:
```python
for i in range(1,11):
    if i==4:
        break
    print(i)
```
```
1
2
3
```

In [28]:
```python
for i in range(1,22):
    if i ==4:
        continue
    print(i)
```
```
1
2
3
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
```

In [29]:
```python
for i in range (1,11):
    pass
```

In [32]:
```python
x=int(input('how many energy drinks you want ?'))
i=1
while i<=x:
```

```
        print('energy drinks:',i)
        i+=1
```

```
energy drinks: 1
energy drinks: 2
energy drinks: 3
energy drinks: 4
energy drinks: 5
```

In [35]:
```
available=7 # the mechine have only 7 energy drinks
x=int(input('how many energy drinks you want ?'))
i=1
while i<=x:
    if i>available:
        break
    print('energy drinks:',i)
    i+=1
print ('out of stock')
```

```
energy drinks: 1
energy drinks: 2
energy drinks: 3
energy drinks: 4
energy drinks: 5
energy drinks: 6
energy drinks: 7
out of stock
```

In [36]:
```
available=7 # the mechine have only 7 energy drinks
x=int(input('how many energy drinks you want ?'))
i=1
while i<=x:
    if i>available:
        print ('out of stock')
        break
    print('energy drinks:',i)
    i+=1
print ('Bye for now')
```

```
energy drinks: 1
energy drinks: 2
energy drinks: 3
energy drinks: 4
energy drinks: 5
energy drinks: 6
energy drinks: 7
out of stock
Bye for now
```

In [40]:
```
for i in range(1,51):
    if i%3==0:
        print(i)
print('end')
```

```
3
6
9
12
15
18
21
24
27
30
33
36
39
42
45
48
end
```

In [41]:
```python
for i in range(1,51):
    if i%3==0:
        continue
    print (i)
print('end')
```

```
1
2
4
5
7
8
10
11
13
14
16
17
19
20
22
23
25
26
28
29
31
32
34
35
37
38
40
41
43
44
46
47
49
50
end
```

In [42]:
```python
for i in range(1,51):
    if i%3==0   or i%5==0 :
        continue
    print (i)
print('end')
```

```
1
2
4
7
8
11
13
14
16
17
19
22
23
26
28
29
31
32
34
37
38
41
43
44
46
47
49
end
```

In [43]:
```python
nums =[12,15,18,21,26,30,40,52]
for num in nums:
    if num%5==0:
        print(num)
```

```
15
30
40
```

In [44]:
```python
nums =[12,15,18,21,26,30,40,52]
for num in nums:
    if num%5==0:
        print(num)
        break
```

```
15
```

In [46]:
```python
nums =[12,18,21,26,52]
for num in nums:
    if num%5==0:
        print(num)
        break
else:
    print ('number not found')
```

```
number not found
```

In [47]:
```python
nums =[12,18,21,26,52,50]
for num in nums:
    if num%5==0:
        print(num)
        break
else:
    print ('number not found')
```

50

From GeeksforGeeks

In [48]:
```python
#For Loop
n=4
for i in  range(0,n):
    print(i)
```

0
1
2
3

In [52]:
```python
li =["geeks","for","geeks"]
for index in range(len(li)):
 print (li[index])
```

geeks
for
geeks

In [53]:
```python
#while loop
cnt=0
while(cnt<3):
    cnt=cnt+1
    print("Hello Geeks")
```

Hello Geeks
Hello Geeks
Hello Geeks

In [56]:
```python
#nested Loops
for i in range (1,5):
    for j in range(i):
        print(i,end='   ')
    print()
```

1
2   2
3   3   3
4   4   4   4

In [58]:
```python
#Loop control statement
for letter in 'greeksforgeeks':
    if letter =='e' or letter =='s':
```

```
            continue
        print ('current letter :',letter)
```

current letter : g
current letter : r
current letter : k
current letter : f
current letter : o
current letter : r
current letter : g
current letter : k

In [61]:
```python
#break statement
for letter in 'geeksforgeeks':
    if letter =='e' or letter=='s':
        break
    print('current letter:',letter)
```

current letter: g

In [63]:
```python
#pass statemnt
for letter in 'geeksforgeeks':
    pass
print('last letter:',letter)
```

last letter: s

In [ ]: