```python
In [ ]:  #programs on while and for loops
```

```python
In [1]:  i = 1              # initializing

         while i<=5:     # condition
             print('data science')
             i = i + 1  # increment
```
```
data science
data science
data science
data science
data science
```

```python
In [2]:  i = 5              # initializing

         while i>=1:     # condition
             print('data science')
             i = i - 1  # decremen
```
```
data science
data science
data science
data science
data science
```

```python
In [3]:  i = 1              # initializing
         while i<=5:     # condition
             print('data science : ', i)
             i = i + 1  # increment
```
```
data science :  1
data science :  2
data science :  3
data science :  4
data science :  5
```

```python
In [4]:  i = 5              # initializing
         while i>=1:     # condition
             print('data science :',i)
             i = i - 1  # decrement
```
```
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') # when we mention end then new line will not create
             j = 1
             while j<=4:
                 print('technology')
```

```
        j = j + 1

    i = i + 1
    print()

    # the output which we got is very lengty but how to make them one line let
```

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 [6]:
```python
i = 1
while i<=5:
    print(' datascience', end = "") # when we mention end then new line will n
    j = 1
    while j<=4:
        print(' technology', end="")
        j = j + 1

    i = i + 1
    print()
```

 datascience technology technology technology technology
 datascience technology technology technology technology
 datascience technology technology technology technology
 datascience technology technology technology technology
 datascience technology technology technology technology

```python
In [7]:  # lets use while loop usig some numbers
         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
```

```python
In [8]:  # lets use while loop usig some numbers
         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
```

```python
In [ ]:  # for loop programs
```

```python
In [12]: name1 = [1,3.5,'hallo'] #i want print the value individualy

         for i in name1:
             print(i)
```
```
1
3.5
hallo
```

```python
In [13]: for i in [2, 3, 7.8, 'hi']:
             print(i)
```
```
2
3
7.8
hi
```

```python
In [14]: for i in range(2,5):
             print(i)
```
```
2
3
4
```

```python
In [16]: # print the value which is divisible by 5
         for i in range(1,51):

             if i%5==0 :
                 print(i)
```

```
5
10
15
20
25
30
35
40
45
50
```

```python
In [18]: # print the value which is divisible by 3 i dont want that value
         for i in range(1,31):

             if i%3!=0 :
                 print(i, end=" ")
```

```
1 2 4 5 7 8 10 11 13 14 16 17 19 20 22 23 25 26 28 29
```

```python
In [19]: #print upto 5 numbers only use break
         for i in range(1,11):
             if i == 6:
                 break
             print(i)
```

```
1
2
3
4
5
```

```python
In [21]: # print 6 numbers continue  except 3
         for i in range(1,7):
             if i == 3:
                 continue
             print(i,end=" ")
```

```
1 2 4 5 6
```

```python
In [22]: for i in range(1,7):
             if i == 2:
                 continue
             print('hello :',i)
```

```
hello : 1
hello : 3
hello : 4
hello : 5
hello : 6
```

```
In [23]: for i in range(1,11):
             pass
```

```
In [24]: for i in range(1,51):# print till 50 which are divisible by 3

             if i%3 == 0:

                 print(i, end=" ")
         print('end')
```

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

```
In [27]: for i in range(1,21):

             if i%3 == 0:
                 continue
             print(i ,end=' ')
         print('end')
```

1 2 4 5 7 8 10 11 13 14 16 17 19 20 end

```
In [28]: for i in range(1,51):

             if i%3 == 0 or i%5 == 0:
                 continue
             print(i)
         #print('end')
         # it will skip all the value which is divisible by 3 or 5
```

```
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
```

In [29]:
```python
for i in range(1,21):
    if i%3 == 0 or i%5 == 0:
        continue
    print(i)
print('end')
# when you apply and you wont get the value which is divisible by both 3 & 5 (
```

```
1
2
4
7
8
11
13
14
16
17
19
end
```