

In [1]:

```

1 # While Loop Example
2 # print 0 to 10 numbers
3 temp = 0
4 while temp < 11:
5     print(temp,end = ' ')
6     temp +=1 # temp=temp+1

```

0 1 2 3 4 5 6 7 8 9 10

In [2]:

```

1 # Even numbers b/w 0 to 21 using while loop
2 t= 1
3 while t<21:
4     if t%2==0:
5         print(t,end = ' ')
6         t+=1

```

2 4 6 8 10 12 14 16 18 20

In [ ]:

```

1 # print decrement numbers b/w 2 dynamic integers using while loop
2 a, b = int(input("Enter A Value= ")),int(input("Enter B Value= "))
3 if a > b:
4     temp = a
5     while temp > b:
6         print(temp,end = ' ')
7         temp -=1

```

In [ ]:

```

1 # Infinate Loop without using increment/Decrement
2 temp = 0
3 while temp<10:
4     print(temp,end = ' ')

```

In [ ]:

```

1 # Infinate Loop using True
2 temp = 1
3 while True:
4     print(temp,end= ' ')
5     temp+=1

```

...

In [1]:

```

1 # when infinate loop is working -->
2 #     True , without increment/Decrement, variable have atleast one value,
3 #     not empty value, Positive & negative Numbers

```

In [ ]:

```
1 # Infinate Loop using variable
2 name= "a"
3 temp = 1
4 while name:
5     print(name,temp)
6     temp+=1
```

...

In [ ]:

```
1 # Infinate Loop using value
2 t = 45
3 while "Abcd":
4     print(t,end= ' ')
5     t-=5
```

...

In [ ]:

```
1 # Infinate Loop using Positive/Negative Numbers
2 t = -7
3 while t:
4     print(t,end = ' ')
5     t-=1
```

...

In [ ]:

```
1 # Infinate Loop using Positive/Negative Numbers
2
3 while -15:
4     print('hello ',end = ' ')
5
```

...

In [ ]:

```
1 # False Cases in While Loop
2 # 0 , Empty variables, Empty values ,False
```

In [1]:

```
1 while 0:
2     print('Check once')
```

In [2]:

```
1 while False:
2     print("again check")
```

In [3]:

```
1 while "":  
2     print('hello')
```

In [4]:

```
1 a= ''  
2 while a:  
3     print('check')
```

In [5]:

```
1 # continue , Break ,pass
```

In [6]:

```
1 # continue Example  
2 # print odd numbers b/w 40 to 50  
3 for temp in range(40, 51):  
4     if temp%2== 0:  
5         continue # Skip the iteration without terminate loop  
6     print(temp,end = ' ')  
7
```

41 43 45 47 49

In [10]:

```
1 # break Example  
2 # print 5 even numbers b/w 1 to 30 numbers  
3 count = 0  
4 for i in range(1,31):  
5     if i %2==0:  
6         count+=1  
7         print(i)  
8     if count==5:  
9         break # terminate the loop(for/while)  
10 print("Out of loop")
```

```
2  
4  
6  
8  
10  
Out of loop
```

In [1]:

```
1 a,b =int(input("Enter Lowest Value= ")),int(input("Enter Highest Value= "))
2 n = int(input("Enter N Value= "))
3 if a<b:
4     count = 0;temp=0
5     while count<n:
6         if temp%2==0:
7             count+=1
8             print(temp)
9         if count==n:
10            break
11        temp+=1
```

```
Enter LOwest Value= 10
Enter Highest Value= 50
Enter N Value= 5
0
2
4
6
8
```

In [3]:

```
1 # pass Example
2 for letter in "python":
3     if letter=='h':
4         pass
5         print('This is pass block')
6     print("current latter:", letter)
7 print("good bye!")
```

```
current latter: p
current latter: y
current latter: t
This is pass block
current latter: h
current latter: o
current latter: n
good bye!
```

## List

- list have []
- mutable data type

In [5]:

```
1 # Declare Empty List
2 a = []
3 print(type(a))
4 b= list()
5 print(type(b))
```

```
<class 'list'>
<class 'list'>
```

In [7]:

```
1 a = [1,2,3,4,5,6]
2 b= [1,2,3.3,"hello",["wow",'a']]
3 print(a)
4 a
```

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

Out[7]:

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

In [9]:

```
1 # print list elements by using index
2 print(a[0])
3 temp=3
4 print(a[temp])
```

1  
4

In [11]:

```
1 c= [1,2,3,4,['a','b','c','d',[41,25,65]]]
```

In [12]:

```
1 c[4]
```

Out[12]:

['a', 'b', 'c', 'd', [41, 25, 65]]

In [14]:

```
1 c[4][-1]
```

Out[14]:

[41, 25, 65]

In [15]:

```
1 c[4][-1][-2]
```

Out[15]:

25

In [16]:

```
1 [11,2,3,4][0]
```

Out[16]:

11

In [17]:

```
1 # slicing :  
2 a[2:5-1]
```

Out[17]:

[3, 4]

In [20]:

```
1 one=1;two=4;three=2  
2 a[one:two:three]
```

Out[20]:

[2, 4]

In [21]:

```
1 d= [one,two,three]  
2 print(d)
```

[1, 4, 2]

In [22]:

```
1 temp = [20-12,2*5,60/3,74%2,40//4,45>10]  
2 print(temp)
```

[8, 10, 20.0, 0, 10, True]

In [ ]:

```
1
```