While Loop

It is used to execute the same set of instructions again and again until the given condition become False.

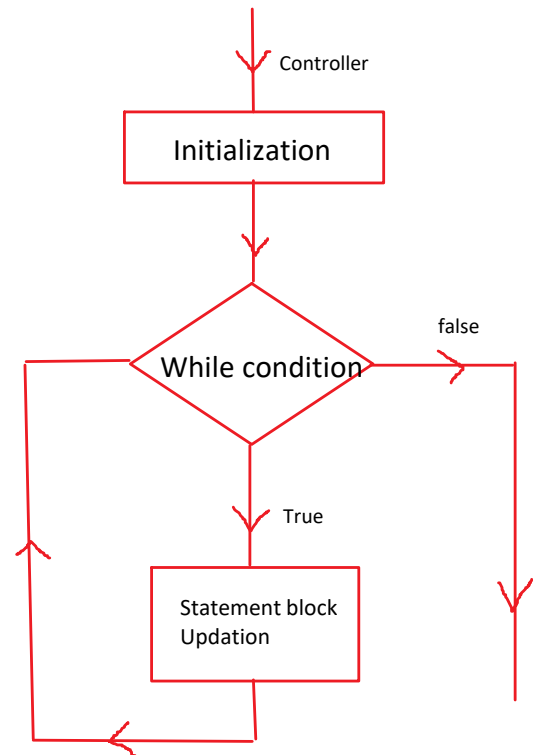Note:- for while loop initialization and Updation is mandatory

Syntax: initialization
            While Condition:

Statement block
Updation

Flow diagram

Examples:-

#1.Wap to print python for 5 times

```
i=1
while i<=5:
   print('python')
   i=i+1 #or i+=1
```
Note:if we didn't do any updationn it will print
    the data infinate times

Controller

Initialization

While condition

false

True

Statement block
Updation

#2.Wap to print n ntaural numbers

```
n=int(input('enter the value for n:'))
i=1
while i<=n:
   print(i)
   i=i+1 #i+=1
```

#Wap to print all the evn numbers between 1 to 50

```
i=2
while i<=50:
   print(i)
   i+=2
#or
i=1
while i<=50:
   if i%2==0:
     print(i)
   i+=1
```

#wap to print all the number which are multiple of 5 between 1 to n

```
n=int(input('enter the value for n:'))
i=1
while i<=n:
```

```python
    if i%5==0:
        print(i)
    i+=1
```

#wap to print multiplication table for n

```python
'''Example:2X1=2...'''
n=int(input('enter the value for n:'))
i=1
while i<=10:
    # print(n,'X',i,'=',n*i)
                or
    print(f'{n} X {i}={n*i}')
    i+=1
```

#wap to print numbers from n to 1
#example:n=100--->99,98,97,96,95,94,93....

```python
n=int(input('enter the value for n:'))
i=n
while i>0: #or i>=1
    print(i,end=' ')
    i-=1
```

#wap to reverse the given number

```python
n=int(input('enter the number:'))
rev=0
while n!=0:
    lastdigit=n%10
    rev=rev*10+lastdigit
```

7.wap to find the sum of individual digits

Example:-123--->1+2+3=6

```python
n=int(input('enter the number:'))
Sum=0
while n!=0:
    Ld=n%10
    Sum=Sum+Ld
    n=n//10
print(Sum)
```

8.wap to find the factorial of a given integer

Example:5!--->5*4*3*2*1=120=====>5*4*3*2*0

```python
n=int(input('enter the number:'))
Prod=1
while n>0:
        Prod=Prod*n
        n=n-1
```

print(Prod)

Assignment:-

1.Wap to extract the uppercase character from the string
2.Wap to print every char from the given string
3.Wap to extract integer from the given list
4.wap to find the sum of integers in a given list
7.wap to convert upper case to lower case and lower case to upper case in given string