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Pw Assignment

Que-1

Ans-1 we use for loop on that time when we want excute loop n time without any any condition

While Loop-

if we want to excute loop n time with the condition on that time we used while loop

```
In [1]: # Que-2
# sum of first 10 natural no using for Loop

sum=0
for i in range(1,11):
    sum=sum+i
print(sum)
```

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```
In [3]: # product of 10 natural no using for Loop
Prod=1
for i in range(1,11):
    prod=prod*i
print(sum)
```

3628800

```
In [1]: 1*2*3*4*5*6*7*8*9*10
```

Out[1]: 3628800

```
In [13]: # sum of 10 natural no using while Loop
count=1
add=0
while count<11:
    add+=count
    count+=1
print(add)
```

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```
In [15]: # product of 10 natural no using while Loop
count=1
prod=1
while count<11:
    prod=prod*count
    count+=1
print(prod)
```

3628800

```
In [10]: # Que 3 Create python program for the compute electricity bill
# calculate electricity bill for the house hold
unit=int(input('hi user kindly enter unit for your house hold'))
if unit<0:
    print('hi user unit never be negative kindly provide positive unit')
else:
    if unit<100:
        print('Your Electric bill are :',unit*4.5)
    elif unit<200:
        print('Your Electric bill are :',(100*4.5)+(unit-100)*6)
    elif unit<300:
        print('Your Electric bill are :',(100*4.5)+(200-100)*6+(unit-200)*10)
    else:
        print('Your Electric bill are :',(100*4.5)+(200-100)*6+(300-200)*10+(unit-300)*20)
```

hi user kindly enter unit for your house hold310
Your Electric bill are : 2250.0

```
In [27]: # Que 4 cube using the for Loop
l=list(range(1,101))
l2=[]
for i in l:
    cube=i*i*i
    if cube%4==0 or cube%5==0:
        l2.append(i)
print(l2)
```

[2, 4, 5, 6, 8, 10, 12, 14, 15, 16, 18, 20, 22, 24, 25, 26, 28, 30, 32, 34, 35, 36, 38, 40, 42, 44, 45, 46, 48, 50, 52, 54, 55, 56, 58, 60, 62, 64, 65, 66, 68, 70, 72, 74, 75, 76, 78, 80, 82, 84, 85, 86, 88, 90, 92, 94, 95, 96, 98, 100]

```
In [18]: # cube with using while Loop
l=list(range(1,101))
final_list=[]
i=0
while i<len(l):
    cube=l[i]*l[i]*l[i]
    if cube%4==0 or cube%5==0:
        final_list.append(l[i])
    i+=1
print(final_list)
```

[2, 4, 5, 6, 8, 10, 12, 14, 15, 16, 18, 20, 22, 24, 25, 26, 28, 30, 32, 34, 35, 36, 38, 40, 42, 44, 45, 46, 48, 50, 52, 54, 55, 56, 58, 60, 62, 64, 65, 66, 68, 70, 72, 74, 75, 76, 78, 80, 82, 84, 85, 86, 88, 90, 92, 94, 95, 96, 98, 100]

```
In [37]: # que 5
s='i want to become a data scientist'
count=0
for i in s:
    if i=='a' or i=='i' or i=='o' or i=='u' or i=='e' or i=='A' or i=='I' or i=='O' or i=='U' or i=='E':
        count+=1
print(count)
```

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In []:

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