

```
In [1]: #While loop
for --> for loop we will use when we know the numebr of iteration(sequence)
while --> if we know the condition then we will always go with whole loop

File "C:\Users\praty\AppData\Local\Temp\ipykernel_15364\3000960308.py", line 2
    for --> for loop we will use when we know the numebr of iteration(sequence)
    ^
SyntaxError: invalid syntax
```

```
In [ ]: Syntax of While Loop:
        while condition:
            body
```

```
In [ ]: #hello world ten times

i=0
while i<10:
    print("hello world")
    i=i+3 #increment or decrement
```

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In [ ]: #Code for printing numbers from 1 to 20
i=1
while i<21:
    print(i)
    i=i+1
```

```
In [ ]: Sum of n natural number

n=10-->1+2+3+4+5+6+7+8+9+10=56
First we will do with for loop then while loop
```

```
In [ ]: n=int(input())
result=0
for i in range(0,n+1):
    result=result+i**3
    print(result)
```

```
In [ ]: for i in range(0,n+1):
        result=result+i
        print(result)

n=int(input())#n number -->
result=0
i=1
while i<=n:
    result=result+1
    i=i+1
print(sum)
```

```
In [ ]: #Program that takes input as a name until the name should be Pratyush
name=""
while name!="Pratyush":
    name=input("Enter name")
    print("Thanks for the confirmation")
```

#Infinite Loop i=0 while True: i=i+1 print("Hello")

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In [ ]: #Transfer Statement
Are used to skip or Terminate the loops
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In [ ]: Break , Continue
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In [ ]: #Break is used to terminate the loop after the given condition will True
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In [ ]: #Break --> It will terminate the current loop based on some condition
0-9
if x==7:
    break
```

```
In [2]: for i in range(10):
        if i==7:
            print("Processing is enough pls break")
            break
        print(i)#0 1 2 3 4 5 6
```

```
0
1
2
3
4
5
6
Processing is enough pls break
```

```
In [3]: i="python"
while True:
    if i=="python":
        print("Break is executed")
        break

    print("hello World")
```

Break is executed

```
In [4]: #Continue--> Will simple skip the current iteration
for i in range(10):
    if i==7:
        print("Processing is enough pls continue")
        continue
    print(i)#0 1 2 3 4 5 6 8 9
```

```
0
1
2
3
4
5
6
Processing is enough pls continue
8
9
```

```
In [ ]: carts=[10,20,500,700,50,60]
for item in carts:
    if item>=500:
        print("We cannot purchase the item its out of our range",item)
        continue
    print(item)
```

```
In [ ]: n=int(input())#n number -->
result=0
i=1
while i<=n:
    result=result*i
    i=i+1
print(sum)
```

```
In [ ]: n=input())#5
if n==0 or n==1:
    print("0 or 1 are not prime numbers")
else:
    for i in range(2,n):
        if n%i==0:
            print("it is not a prime number")
            break
    else:
        print("Prime number")
```