

Loop :-

- While loop
- For loop
- Do while

While loop:-

- Repeat a statement or group of statement while a given condition is true.
- It test the condition before executing the loop body.

For loop:-

- It excite a sequence of statement multiple time and appropriate the code that manages the loop variable.
- While expression:
 - Statement
 - Body / suite
- Write a program to print upto n

In [40]:

```
a=int(input("enter n " ))

i = 1 ## inilisation
while(i<=a):
    print(i)
    i+=1
```

1
2
3

In []:

- Write a program to print odd number upto n

In [9]:

```
n = int(input("Enter the number :- "))
flag=1
while flag<=n:
    if flag%2!=0:
        print(flag)
    flag+=1
print("good bye")
```

```
1
3
good bye
```

In [13]:

```
a = 0
b = 1
n = 10
i = 1
print(a , b )
while(i<=n):
    c=a+b
    print(c , end=" ")
    a=b
    b=c
    i+=1
```

```
0 1
1 2 3 5 8 13 21 34 55 89
```

In []:

- fibonancii series :-

In [11]:

```
a=0
b=1
n=int(input("enter the no:- "))
print(a)
print(b)
i=2
while i!=n:
    c=a+b
    print(c)
    a=b
    b=c
    i+=1
```

```
0
1
1
```

- Swap two number

In [14]:

```
a = int(input("Enter 1st no "))
b = int(input("Enter 2nd number "))
temp = a
a = b
b = temp
print(a , b )
```

15 12

- Swap two number using advanced

In [18]:

```
a = int(input("Enter 1st no "))
b = int(input("Enter 2nd number "))
a , b = b , a
print(a , b )
```

23 12

In [23]:

```
### 2 - loop
i = 0
m = 4
n = 3
while(i<m):
    j=0
    while(j<n):
        print(i , end= " ")
        j+=1
    print()
    i+=1
```

0 0 0
1 1 1
2 2 2
3 3 3

- fibonancii series :-

a=0 b=1 n=int(input("enter the no:- ")) flag=0 while flag<n: print(a,end=" ") a,b=b,a+b flag+=1

- write a program to append the square in the list --> [1 , 4 , 9 , 16 , 25 ,...n]

In [44]:

```
n =int(input("enter the no:- "))
square_list = []
i = 1
while( i <=n):
    #print(i*i , end = " ")
    square_list.append(i*i)
    i+=1
print(square_list , type(square_list))
```

```
[1, 4, 9, 16, 25, 36, 49, 64, 81, 100] <class 'list'>
```

In [45]:

```
n =int(input("enter the no:- "))
square_dict = {}
i = 1
while( i <=n):
    square_dict[i] = i*i
    i+=1
print(square_dict , type(square_dict))
```

```
{1: 1, 2: 4, 3: 9, 4: 16, 5: 25, 6: 36, 7: 49, 8: 64, 9: 81, 10: 100}
0} <class 'dict'>
```

```
n = 4 ***** ----* ----* 1 0 ***** ---** ---** 2 2 1 1 ***** --*** --*** 3 3 3 0 0 0 ***** _**** _*
*** 4 4 4 4 1 1 1 1 (1) (2) (3) (4) (5) (6) (7) ***** (8) ***** (9)
```

for loop :-

- [start: stop : step]
- range(start,stop,step).

In [3]:

```
a=10
print(range(a))
```

```
range(0, 10)
```

In [5]:

```
for i in range(a):
    print(i)
```

```
0
1
2
3
4
5
6
7
8
9
```

In [67]:

```
### for even number print
for i in range(0,20,2):
    print(i)
```

0
2
4
6
8
10
12
14
16
18

In [68]:

```
### for odd number print
for i in range(1,20,2):
    print(i)
```

1
3
5
7
9
11
13
15
17
19

In [9]:

```
a="python"
for i in a:
    print(i)
for i in range(len(a)):
    print(a[i])
```

p
y
t
h
o
n
p
y
t
h
o
n

In [90]:

```
name = input("Enter name ")
count=0
for i in name:
    count+=1
print(count)
```

5

In [91]:

```
a=["my", "name", "is", "hrkhan",20]
for i in a:
    print(i)
for i in range(len(a)):
    print(a[i])
```

my
name
is
hrkhan
20
my
name
is
hrkhan
20

- break
- continue
- pass

In [99]:

```
a="python"
for i in range(len(a)):
    if(a[i]=='h'):
        break
    print(a[i])
print("you can under stand break statement")
```

p
y
t
you can under stand break statement

In [100]:

```
a="python"
for i in range(len(a)):
    if a[i]=="h":
        continue
    print(a[i])

print("    you can under stand continue statement")
```

```
p
y
t
o
n
    you can under stand continue statement
```

In [101]:

```
for i in range(len(a)):
    print(a[i])
    if a[i]=="h":
        pass
    print("under stand pass statement!!!")
print("    you can under stand pass  statement")
```

```
p
y
t
h
under stand pass statement!!!
o
n
    you can under stand pass  statement
```

In []:

In []:

In []:

In []:

In []:

In []: