16/09/2025

Write a program for printing 1st 10 Fibonacci series Program:

```
a,b=0,1
i=0
while (i<=10):
    print(a)
    s=a+b
    a=b
    b=s
    i=i+1
```

Output:

0

1

1

2

3

5

8

13

21

34

55

Write the program to calculate sum of digits without using any inbuilt functions

Program:

```
num = int(input("Enter a number: "))
s = 0
while num > 0:
    digit = num % 10
    s = s+digit
```

```
    num = num // 10
print("Sum of digits:", total)
```

Output:

```
Enter a number:  3582
Sum of digits: 18
```

Nested loops:

1) for loop inside for loop

A “for loop inside a for loop” is called a nested for loop. It means one for loop is placed inside another for loop, so the inner loop runs completely every time the outer loop runs once.

Syntax:

```
for var1 in range():# outer loop
    for var2 in range():#inner loop
        inner loop statements
    outer loop statements
```

ex 1:

```
for i in range(1,11,1):
    for j in range(1,11,1):
        print(i*j,end="\t")
    print()
```

o/p:

1	2	3	4	5	6	7	8	9	10
2	4	6	8	10	12	14	16	18	20
3	6	9	12	15	18	21	24	27	30
4	8	12	16	20	24	28	32	36	40
5	10	15	20	25	30	35	40	45	50
6	12	18	24	30	36	42	48	54	60
7	14	21	28	35	42	49	56	63	70
8	16	24	32	40	48	56	64	72	80
9	18	27	36	45	54	63	72	81	90
10	20	30	40	50	60	70	80	90	100

ex 2:

```
for i in range(1,11,1):
    for j in range(1,6,1):
        print(i*j,end="\t")
    print()
```

o/p:

1	2	3	4	5
2	4	6	8	10
3	6	9	12	15
4	8	12	16	20
5	10	15	20	25
6	12	18	24	30
7	14	21	28	35
8	16	24	32	40
9	18	27	36	45
10	20	30	40	50

ex 3:

```
for i in range(1,6,1):
    for j in range(1,6,1):
        if((i*j)%2==0):
            print(i*j,end="\t")
        else:
            print(" ",end="\t")
    print("\n")
```

o/p:

2 4

2 4 6 8 10

6 12

4 8 12 16 20

10 20