#code Day-10 Date: 16/09/2025

1. write a pgm to print 1st 10 fibonacci series

```
first_num = 0
second_num = 1
i = 1
print("fibonacci series")
while i <= 10:
    print(first_num)
    next_num = first_num + second_num
    first_num = second_num
    second_num = next_num
    i = i+1
```

o/p:

fibonacci series
0
1
1
2
3
5
8
13
21
34

#fibonacci series

0 + 0 = 0
0 + 1 = 1
1 + 1 = 2
1 + 2 = 3
2 + 3 = 5
3 + 5 = 8
8 + 5 = 13

a = 0
b = 1
} initialized

a + b = c = 0 + 1 = 1
1 + 1 = 2
2 + 1 = 3
3 + 2 = 5

__/__/____

2. Write a program to calculate sum of digits without using any functions

3582 = 3+5+8+2 = 18

→ logic 3582

3582 %10 → 2 →①

3582 //10 → 358

358 %10 → 8 →②

358 //10 → 35

35 %10 → 5 →③

35 //10 → 3 → 4

3+5+8+2

→
```
num = int(input("num = "))
S = 0
while(num > 0):
        digit = num %10
        s = s+digit
        num = num//10
print(s)
#To enter num<0 - if else.
if(num<0):
        print("enter +ve number")
else:
        print(S)
```

o/p:
num = 3582
18

- Nested loop: if a loop exists inside another loop

__/__/____

— Nested loop :

1) for loop inside for loop

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

3. Write a pgm to print multiplication table.

→

```
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
⋮	⋮	⋮	⋮	⋮
9	18	27	36	45
10	20	30	40	50

while loop →

```
row=1
while row<=10:
    col=1
    while col<=5:
        print(row*col, end="\t")
        col=col+1
    print()
    row=row+1
```

__/__/____

4. 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	