

DAY-11

September 16

1. Write a program for fibonacci series using while loop

0 1 1 2 3 5 8 13 21 34

SAMPLE:

2 4 6 8

1 3 5 7

0 1

1+0

1

1+1

2

2+1

3

5

8

13

CODE: a

= 5 b = 7

print(a,b)

a,b = b,a

print(a,b)

5 7 7 5

CODE:

```
a,b = 0,1 i = 1
```

```
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

2.write a program to calculate sum of digits without functions using while loop.

257 = 2+5+7 = 14 CODE:

```
num = int(input("enter a value: "))
```

```
sum = 0 while(num>0):    digit =
```

```
num%10    sum = sum + digit
```

```
num = num//10 print(sum)
```

OUTPUT:

enter a value: 1234

10

EXPLANATION:

$\text{num} = 257$

$\text{sum} = 0 \quad 257 > 0$

$257 \% 10 = 7$

$0 + 7 = 7$

$257 // 10 = 25$

$\text{num} = 25 \quad \text{sum}$

$= 7$

$25 \% 10 = 5$

$7 + 5 = 12$

$25 // 10 = 2$


```
num = 2 sum
```

```
= 12 2>0
```

```
2%10=2
```

```
12+2=14
```

```
2//10=0 num
```

```
= 0 sum =
```

```
14 0>0
```

```
print(sum)
```

1. **for** loop inside **for** loop

SYNTAX:

```
for var1 in range(): #outer loop
```

```
for var2 in range(): #inner loop
```

```
statements of inner loop
```

```
statements of outer loop
```

EXAMPLE: **for i in**

```
range(1,11,1): for j in
```

```
range(1,11,1):
```

```
print(i*j,end="\t")
```

```
print()
```

7 8 9 10

1	2	3	4	5	6
---	---	---	---	---	---

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

```

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

```

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
----	----	----	----	----


```

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()

```

		2		4	
2	4	6	8	10	
		6		12	
4	8	12	16	20	
		10		20	

