

Exercise 4

Group 5

1. Write a program to find the sum of series $1+3+5+7+...+N$

Program

```
N = int(input("Enter the number:"))
sum = 0
for i in range(1,N+1,2):
    sum += i
print("Sum of the series 1+3+5+7+...+n",sum)
```

Output

Enter the number:7

Sum of the series 1+3+5+7+...+n 1

Sum of the series 1+3+5+7+...+n 4

Sum of the series 1+3+5+7+...+n 9

Sum of the series 1+3+5+7+...+n 16

1.(b) Write a program to find the sum of series $1+2+3+...+N$.

Program

```
N = int(input("Enter the number:"))
sum = 0
for i in range(1,N+1):
    sum+=i
print("Sum of the series 1+2+3+...+n", sum)
```

Output

Enter the number:3

Sum of the series 1+2+3+...+n 1

Sum of the series 1+2+3+...+n 3

Sum of the series 1+2+3+...+n 6

2. Pyramid - Alternate numbers pattern using while loop

Program

```
rows=5
i=1
while i<=rows:
    j=1
    while j<=i:
        print((i*2-1),end=" ")
        j=j+1
    i=i+1
    print(' ')
```

Output

```
1
3 3
5 5 5
7 7 7 7
9 9 9 9 9
```

3. Pyramid Pattern - Equilateral triangle pattern of star

Program

```
for i in range(1,7):  
    print()  
    for i in range(1,i+1):  
        print("*",end=" ")
```

Output

```
*  
  
* *  
  
* * *  
  
* * * *  
  
* * * * *  
  
* * * * * *
```

4. Print all the prime numbers from 1 -50

Program

```
a=0
b=50
print("Prime numbers between",a,"and",b,"are:")
for num in range(a,b+1):
    if num>1:
        for i in range(2,num):
            if(num%i)==0:
                break
        else:
            print(num)
```

Output

Prime numbers between 0 and 50 are:

2
3
5
7
11
13
17
19
23

29

31

37

41

43

47