

## Ex 4. Programs on Control Statements

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

Program:

```
n=int(input("Enter n value:"))
```

```
sum=0
```

```
i=0
```

```
temp=1
```

```
while i<n:
```

```
    sum+=temp
```

```
    temp+=2
```

```
    i+=1
```

```
print(sum)
```

Ouput:

```
Enter n value:4
```

```
16
```

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

Program:

```
n=int(input("Enter n value:"))
```

```
sum=0
```

```
i=1
```

```
while i<=n:
```

```
    sum+=i
```

```
    i+=1
```

```
print(sum)
```

Output:

```
Enter n value:5
```

```
15
```

## II. Number 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
```

### III. Pyramid Pattern - Equilateral triangle pattern of star

#### Program:

```
n=int(input("Enter n value:"))
```

```
for i in range(1,7):
```

```
    print(' '*n, end=")
```

```
    print('* '*(i))
```

```
    n-=1
```

#### Output:

Enter n value:5

\*

\* \*

\* \* \*

\* \* \* \*

\* \* \* \* \*

\* \* \* \* \* \*

#### IV. Print all the prime numbers from 1–5

##### Program:

```
lower=1
```

```
upper=50
```

```
print("Prime numbers between", lower, "and", upper, "are:")
```

```
for i in range(lower, upper + 1):
```

```
    if i > 1:
```

```
        for j in range(2, i):
```

```
            if (i% j== 0):
```

```
                break
```

```
        else:
```

```
            print(i,end=",")
```

##### Output:

Prime numbers between 1 and 50 are:

2,3,5,7,11,13,17,19,23,29,31,37,41,43,47

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