

## 1.NUMBER SERIES

A.Write a program to print series 0 6 12 20 30 42...N

### PROGRAM

```
n=int(input("enter the value of N:"))
```

```
a=0
```

```
d=2
```

```
for i in range(1,n+1):
```

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

```
    a+=d
```

```
    d+=2
```

### OUTPUT

```
enter the value of N:6
```

```
0 2 6 12 20 30
```

B.Write a program to print series 0,2,8,14,24,34...N

### PROGRAM

```
n=int(input("Enter the range of number(limit):"))
```

```
i=1
```

```
pr=0
```

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

```
    if(i%2==0):
```

```
        pr=pow(i,2)-2
```

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

```
    else:
```

```
        pr=pow(i,2)-1
```

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

```
    i+=1
```

### OUTPUT

Enter the range of number(limit):6

028142434

## 2.NUMBER PATTERNS

PYTHON PROGRAM TO PRINT THE FOLLOWING SIMPLE NUMBER PATTERN USING A FOR LOOP

### PROGRAM

```
for i in range(0,6):  
    for j in range(i):  
        print(i,end=" ")  
    print("\r")
```

### OUTPUT

1

2 2

3 3 3

4 4 4 4

5 5 5 5 5

## 3.PYRAMID PATTERNS

SIMPLE HALF PYRAMID PATTERN

```
for i in range(6):  
    for j in range(i):  
        print('*',end="")  
    print(" ")
```

## OUTPUT

\*

**\*\***

\*\*\*

\*\*\*\*

\* \* \* \* \*

.....

#### 4.CONVERT DECIMAL TO BINARY NUMBER

```
dec=int(input("enter a decimal number:"))
```

binary=0

ctr=0

temp=dec

```
while(temp>0):
```

```
binary=((temp%2)*(10**ctr))+binary
```

```
temp=int(temp/2)
```

ctr+=1

```
print("the binary of dec",binary)
```

## OUTPUT

enter a decimal number:2

the binary of dec 10