

# PROGRAMS AND CONTROL STATEMENTS

## SUM OF ARITHMETIC OPERATIONS

### Program:

```
a = 1
i = 0
n = int(input("Enter n value:"))
while(i < n):
    print(a , end = " ")
    a += 3
    i = i + 1
```

### Output:

```
Enter n value : 6
1 4 7 10 13 16
```

# PROGRAMS AND CONTROL STATEMENTS

## SUM OF CUBE OF DIGITS

### Program:

```
n = int(input("Enter n value:"))
i = 1
sum = 0
for i in range(0, n+1):
    print(i**3,end = ' ')
    sum = sum + (i**3)
print("\n Sum of series:\n",sum)
```

### Output:

```
Enter n value : 7
0 1 8 27 64 125 216 343
Sum of series:
784
```

# PROGRAMS AND CONTROL STATEMENTS

## HALF PYRAMID OF NUMBERS

### Program:

```
rows = int(input("Enter n value:"))  
for i in range(1,rows + 1):  
    for j in range(1, i + 1):  
        print(j,end = ' ')  
    print("")
```

### Output:

```
Enter n value : 5  
1  
1 2  
1 2 3  
1 2 3 4  
1 2 3 4 5
```

# PROGRAMS AND CONTROL STATEMENTS

## DOWNWARD HALF PYRAMID

### Program:

```
rows = int(input("Enter n value:"))  
for i in range(rows + 1, 0, -1):  
    for j in range(0, i-1):  
        print("*", end = ' ' )  
    print("")
```

### Output:

Enter n value : 5

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# PROGRAMS AND CONTROL STATEMENTS

## BINARY TO DECIMAL

### Program:

```
bin = int(input("Enter the binary value:"))
i = 0
sum = 0
while(bin!=0):
    rem = bin % 10
    sum = sum + rem * (2**i)
    i = i + 1
    bin = bin // 10
print(sum)
```

### Output:

```
Enter the binary value : 1101
13
```