**EX 4:**

**GROUP 8:**

**NUMBER OF SERIES:**

**1.PRINT ARTHEMETIC SERIES**

**series=[1,4,7]**

**for i in range(3,30):**

**series.append(series[i-1]+3)**

**print(series)**

**O\P**

**[1, 4, 7, 10, 13, 16, 19, 22, 25, 28, 31, 34, 37, 40, 43, 46, 49, 52, 55, 58, 61, 64, 67, 70, 73, 76, 79, 82, 85, 88]**

**2.FIND SUM OF SERIES**

**1\*\*3+2\*\*3+3\*\*3+4\*\*3+….n**

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

**sum=0**

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

**sum=sum+i\*\*3**

**print ("sumof the series is:",sum)**

**o\p**

**enter the value of n:5**

**sumof the series is: 1**

**sumof the series is: 9**

**sumof the series is: 36**

**sumof the series is: 100**

**sumof the series is: 225**

**NUMBER PATTERNS:**

**1.Half pyramid pattern of numbers**

**n=5**

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

**for j in range(1,i+1):**

**print(j,end="")**

**print("/r")**

**o\p**

**1/r**

**12/r**

**123/r**

**1234/r**

**12345/r**

**3.DOWNWARD HALF PYRAMID PATTERN**

**n=int(input("enter the num rows:"))**

**for i in range (n,0,-1):**

**print((n-i)\*""+i\*'\*')**

**o\p**

**enter the num rows:5**

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

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

**\*\*\***

**\*\***

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**4.CONVERT BINARY TO DECIMAL**

**binary\_num=list(input("input a binary:"))**

**value=0**

**power=len(binary\_num)-1**

**while power>=0:**

**digit=binary\_num.pop()**

**if digit=="1":**

**value+=pow(2,power)**

**power-=1**

**print("decimal value is",value)**

**O/P**

**input a binary:2**

**decimal value is 0**