Python Workshop

1. Problem statement: Given a number 'N', find out the sum of the first N natural numbers.
   - **Input: N=5   Output: 15**
   - **Explanation: 1+2+3+4+5=15**

2. Problem Statement: Find all factors of a number or find all distinct divisors of a natural number.
   - **Input: n = 6   Output: 1,2,3,6**
   - **Explanation: 6 is divisible by 1,2,3,6**

3. Write a program to count the number of words in a given string.
   - **"Ram Charan" → 2**
   - **"Prabhas" → 1**

4. Check if a String is a Palindrome
   - **"malayalam" → true**
   - Write a program to check if a given string is a palindrome.

5. Write a program to print the pattern:
   ```
   *
   * *
   * * *
   * * * *
   ```
   Where the value of n = 4

6. Write a program to print the pattern:
   ```
   1
   0 1
   1 0 1
   0 1 0 1
   ```
   Where the value of n = 4

7. Write a program that takes a string move all the vowels in string to last of it
   - **"Hyderabad" → "Hydrbdeaa"**

8. Write a program to print the pattern:
   ```
   1
   2 3
   4 5 6
   7 8 9 10
   ```
   Where the value of n = 4

9. Sum of digits of a number
   - **187 → 1 + 8 + 7 = 16 → 1 + 6 = 7**
   - Write a program to find the sum of digits till it reduces to single digit

10. Find the Second Largest Element
    - **[3, 1, 4, 1, 5, 9] → 5**
    - Write a program to return the second largest number in an array.