Lab Practice

Q1. Print the following pattern using nested loops:

```
        *
       ***
      *****
     *******
    *********
   ***********
  *************
   ***********
    *********
     *******
      *****
       ***
        *
```

Q2. An Armstrong number (or narcissistic number) for a given number of digits is a number such that the sum of its digits raised to the power of the number of digits equals the number itself. For example: $(1 \leq N \leq 10^5)$

For example:

- $153 = 1^3 + 5^3 + 3^3 = 153$ (3-digit number)
- $9474 = 9^4 + 4^4 + 7^4 + 4^4 = 9474$ (4-digit number)

Q3. Find the Intersection of Two Vectors Given two vectors, write a program to find the common elements (intersection) between them. Example:

Input:

Vector 1: {1, 2, 3, 4, 5}

Vector 2: {3, 4, 5, 6, 7}

Output:

{3, 4, 5}