UDSC – 401 (P)

Session – I (12 December, 2024)

1. Write a Python program to input 5 numbers from the user and store them in a list.

2. Create a program to input 10 integers from the user and display the list in reverse order.

3. Write a program to input numbers from the user until the user enters -1. Store all numbers (excluding -1) in a list.

4. Ask the user to input a string of comma-separated values (e.g., "1,2,3") and convert it into a list of integers.

5. Create a program that generates a list of numbers from 1 to 20 using a for loop.

6. Write a program to populate a list with the squares of numbers from 1 to 10.

7. Create a program that populates a list with even numbers from 2 to 20.

8. Write a Python program to input 10 integers and populate a new list with only the odd numbers from the original list.

9. Write a program that generates a list containing all multiples of 5 between 10 and 50.

10. Ask the user for a number `n` and generate a list containing the first `n` Fibonacci numbers.

11. Populate a list with the first 10 factorial numbers (e.g., [1, 1, 2, 6, 24, ...]).

12. Generate a list of all prime numbers less than 50.

13. Write a Python program to input two vectors (of the same length) as lists and compute their dot product.

14. Modify Problem 13 to check if the two vectors are of the same length. If not, display an error message.

15. Create a program that calculates the dot product of two 3-dimensional vectors entered by the user.