[10 MARKS]

Instructions-

Please submit your code file in Google Classroom.
Once submitted, have it evaluated by your TA during the lab session.

Q1. Write a program in C to calculate the factorial of a number?   **[2 marks]**

Q2. Write a program in C to reverse an array of integers. Creating a specific function for the operation is optional.   **[4 marks]**

     Instructions:

     a. **The inputs should be taken from the user.**
     b. **The first line of the input should contain the number of integers.**
     c. **The elements can be taken as input in the following line.**

     Example:
         Input:
            4
            1 2 3 4
         Output
            4 3 2 1

Q.3 Write a C program to find the majority element of the array. A majority element of an array is the one that appears more than n/2 times in an array of size n. If no majority element, return -1.   **[4 marks]**

Instructions:

       1. Inputs should be taken from the user.

       2. The first line of input should contain the size of array n.

       3. The second line of input should contain the elements of the array.

Solution:

Solution 1: using a frequency map

Solution 2: Alternate solution using majority element