

## Question 1

```
#include <iostream>
using namespace std;

int main() {
    // Define the length of the array
    const int length = 10;
    int arr[length]; // Array declaration

    // 1- Input values from the user
    cout << "Enter 10 numbers: ";
    for (int i = 0; i < length; i++) {
        cin >> arr[i];
    }

    // 2- Print the array values in order
    cout << "The array values are: ";
    for (int i = 0; i < length; i++) {
        cout << arr[i] << " ";
    }
    cout << endl;

    // 3- Print the array values in reverse order
    cout << "The array values in reverse are: ";
    for (int i = length - 1; i >= 0; i--) {
        cout << arr[i] << " ";
    }
    cout << endl;

    // 4- Calculate the sum of the array elements
    int sum = 0;
    for (int i = 0; i < length; i++) {
        sum += arr[i];
    }
    cout << "The sum of the array elements is: " << sum << endl;

    // 5- Calculate the product of the array elements
    long long product = 1;
    for (int i = 0; i < length; i++) {
        product *= arr[i];
    }
    cout << "The product of the array elements is: " << product << endl;

    return 0;
}
```

## Question 2

```

#include <iostream>
using namespace std;

int main() {
    // Define the number of rows and columns
    const int rows = 3, columns = 3;

    // Create a 2D array
    int matrix[rows][columns];

    // Input values from the user
    cout << "Enter the values for the matrix (3x3):" << endl;
    for (int i = 0; i < rows; i++) {
        for (int j = 0; j < columns; j++) {
            cout << "Element [" << i + 1 << "][" << j + 1 << "]: ";
            cin >> matrix[i][j];
        }
    }

    // Print the matrix
    cout << "\nThe entered matrix:" << endl;
    for (int i = 0; i < rows; i++) {
        for (int j = 0; j < columns; j++) {
            cout << matrix[i][j] << " ";
        }
        cout << endl; // Move to the next row
    }

    // Calculate and print the sum of each row
    cout << "\nSum of each row:" << endl;
    for (int i = 0; i < rows; i++) {
        int rowSum = 0;
        for (int j = 0; j < columns; j++) {
            rowSum += matrix[i][j];
        }
        cout << "Sum of row " << i + 1 << ": " << rowSum << endl;
    }

    // Calculate and print the product of each row
    cout << "\nProduct of each row:" << endl;
    for (int i = 0; i < rows; i++) {
        int rowProduct = 1;
        for (int j = 0; j < columns; j++) {
            rowProduct *= matrix[i][j];
        }
        cout << "Product of row " << i + 1 << ": " << rowProduct << endl;
    }
}

```

```
    return 0;  
}
```