

1. Write a program that read int values from input, put them in an array, and print the count of even integers in the array. Hint: First ask user the number of values  $n$ , and then in a loop read  $n$  values. You may assume that  $n \leq 50$ .
2. Write a program that given an array of real numbers prints true if the list is in sorted in ascending order and false otherwise. For example, if arrays store {16.1, 12.3, 22.2, 14.4} and {1.5, 4.3, 7.0, 19.5, 25.1, 46.2} respectively, your program should print false and true respectively. Assume the array has at least one element. A one-element array is considered to be sorted.
3. Write a program that reverses the order of values in a one-dimensional string array. For instance, the following array {"zero", "one", "two", "three", "four", "five", "six", "seven", "eight", "nine"} would be transformed to {"nine", "eight", "seven", "six", "five", "four", "three", "two", "one", "zero"}.

Note: You may use hard-coded array in this exercise

4. Write a program max\_ones.cpp that given an array of integers, find the maximum number of consecutive 1's present in the array. Example:

For the array {1, 0, 1, 1, 1, 1, 1, 0, 1, 0, 1, 1, 1}, the maximum number of consecutive 1's is 5.

For the array {1, 1, 0, 0, 1, 0, 1, 0, 1, 1, 1, 1, 0}, the maximum number of consecutive 1's is 4.

For the array {0, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1}, the maximum number of consecutive 1's is 1.

Note: You may use hard-coded array in this exercise.

5. Write a program that takes a 3x3 matrix of integers as input from the user, computes the sum of each row and each column, and then prints the results. Additionally, find and print the total sum of all the elements in the matrix.
6. Write a program card that simulates a standard deck of playing cards using a 2D array. The program should create a 4x13 matrix to represent the deck, where each row represents a suit (Hearts, Diamonds, Clubs, Spades) and each column represents a card rank (Ace through King). The program should perform the following tasks:
  - Initialize the Deck: Create a 2D array to represent the deck, where each element is a string representing a card (e.g., "Hearts Ace", "Diamonds 2", ..., "Spades King").
  - Shuffle the Deck
  - Display the Deck