

Communication Software Design

Lab 03 vector

10/04/2019

Q1. Please write a program to read in positive integer numbers and store them to a vector. Eliminate duplicate numbers and sort them in order (from larger to smaller). Print out 1) the numbers in order (without duplicate ones), and 2) how many duplicates you found.

Use a pre-defined value to terminate the reading (e.g. -1 is used as a terminator in the example below)

Example:

input: 1 2 3 4 5 6 3 6 9 5 10 13 -1

output:

13 10 9 6 5 4 3 2 1 (**found 3 duplicates**)

Hint: use sort function <http://www.cplusplus.com/reference/algorithm/sort/>

Q2. Write a function to detect which two elements are we are looking for:

Given a vector of 8 integers and a target number (read from user's input), your function should return two **indices** of the two numbers such that they add up to a specific target. (Assume that each input would have **exactly** one solution)

in the given main function, you should implement the code to read in 8 numbers (store them to a vector) and a target number from user input.

Examples:

Given `nums = [3, -8, 12, 7, 11, 8, 30, -1]`, `target = 20`,

Because `nums[2] + nums[5] = 12 + 8 = 20`,

return `[2, 5]`.