

COSC 2030

Performance Indicator (i.1): Program in C++, including use of the C++ Standard Library

Problem 3.2 from Exam 3

Give a diagram of the storage structure for a Standard Template Library vector. Explain your diagram.

Give a diagram of the storage structure for a Standard Template Library list. Explain your diagram.

The STL list class has a method that inserts a new entry at the front of this list object. The STL vector class does not have this method. Why not?

25 students were assessed.

8 students excelled.

13 students mastered.

3 students partially mastered.

1 student was below expectations.

COSC 2030

Performance Indicator (i.3): Use an IDE to edit, compile, and debug a program

Project 01: Read and process a file of lists of numbers

Task

Write a C++ program that reads lists from a file and reports the name, size, mean if appropriate, and smallest number if appropriate for each list; and reports the list name and sum of the list with the largest sum.

The file to be read consists of:
the number of lists in the file,
then

zero or more of:

- a list sentinel, a number not equal to any value in this list;
- the list name, readable as a C++ STL string;
- zero or more list values, readable as C++ doubles;
- the list sentinel

26 students were assessed.

19 students excelled.

no students mastered.

7 students partially mastered.

no students were below expectations.