

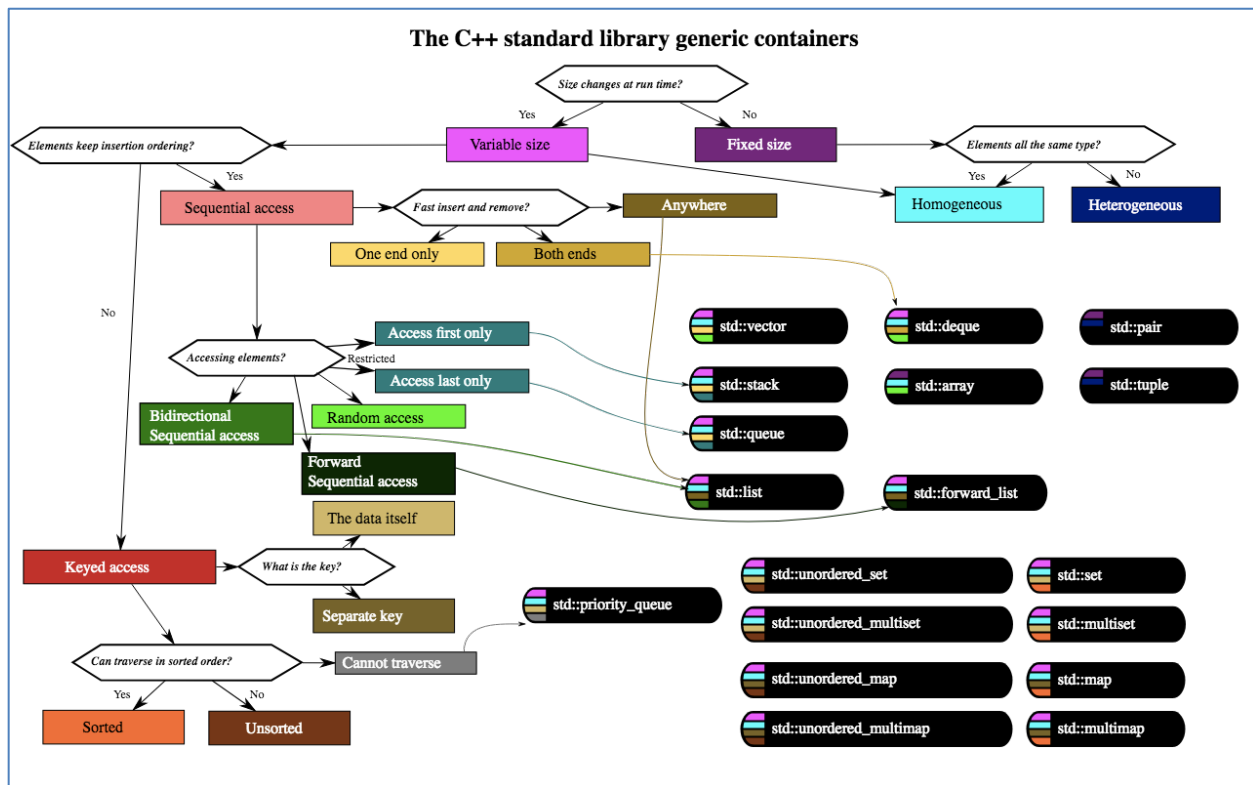
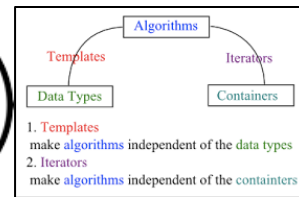
## Introduction to Programming

(CS200)

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Standard Template Library (STL)

27-April-2018





## CS 200 Lab 12 Spring 2018

### Lab Guidelines

1. Make sure you get your work graded before the lab time ends.
2. You put all your work onto the LMS folder designated for the lab (i.e. "Lab10") before the time of the lab ends.
3. Talking to each other is NOT permitted. If you have a question, ask the lab assistants.
4. The object is not simply to get the job done, but to get it done in the way that is asked for in the lab.
5. Any cheating case will be reported to Disciplinary Committee without any delay.

**NOTE: Define a class interface separately and its methods separately. Do not write inline code.**

Marks: \_\_\_\_\_ Name: \_\_\_\_\_ Roll #: \_\_\_\_\_

Task 1	1	2	3	4	5			Total
	10	10	10	10	10			50

Task 2	1	2	3	4	5			Total
	10	10	10	10	10			50

Let's Begin.....

Total marks Obtained

**/100**



### Task 1:

(50)

Write a class that implements a set of items. A set is a collection of items in which no item occurs more than once. Internally, you represent the set using vector. However, the class should externally support the following functions:

1. Add a new item to the set. If the item is already in the set then nothing happens. 10
  2. Remove an item from the set. 10
  3. Return the number of items in the set. 10
  4. Determine if an item is a member of the set. 10
- Note: Use STL iterators inside loops (iterator based iterations).
5. Make a main to test these functions. 10

**STOP AND SHOW YOUR WORK TO THE TA**



### Task 2:

(50)

Imagine you need to store information about each student that is currently enrolled in CS200 lab in some data structure. In order to achieve this task you have been instructed to use **maps**, where you can set id as key and the name as value. Create a student class that implements the following functions:

- |  |    |
|--|----|
| 1. Insert a new record.  | 10 |
| 2. Delete some record.   | 10 |
| 3. Check whether a student is enrolled for the course. If true, retrieve its record. | 10 |
| 4. Display all the records inside.   | 10 |
| 5. Make a main function to test these functions.                                     | 10 |

**STOP AND SHOW YOUR WORK TO THE TA**



## CS 200 Lab 12 Spring 2018

Zip your tasks into one folder with format:

YourRollNo-Lab12

Example "**2001001-Lab12**" and upload on LMS before the tab is closed.

You will not be given extra time.