The Standard Template Library (STL) in C++ is the collection of all the built-in Data Structures. It is similar to the Collection framework in Java. [#include <lib_name>]

Important STL Libraries: → java.util

(I) stack
(II) queue → BFS
(III) list ⟺ forward_list → Singly LL
list → Doubly LL
(IV) map ⟺ ordered_map
unordered_map (Hashmap)
(V) set ⟺ ordered_set
unordered_set (HashSet)
(VI) vector → Dynamic Array

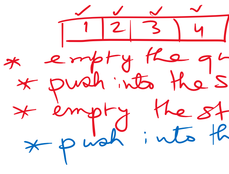
* Map with list of strings.

pair

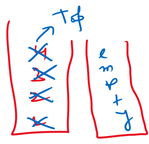
Interview Questions

Write a C++ function to reverse a given queue and display the elements.

stack



* empty the queue
* push into the stack
* empty the stack
* push into the queue



STL Maps: → dictionary <key, value>

#include <map>

map → Ascending or Alphabetical order

un-ordered_map → hashmap in Java {Hashing Order} <HashTable>

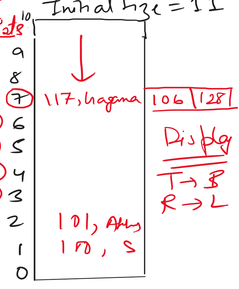
Hash Collision

Java HashTable → java.util.HashTable;

Hash Table → Array of Lists

ht.put(Integer, String)

117, "Gagana"
106, "Akshitha"
128, "Gnanashree"
101, "Akshay"
100, "Spandana"



117 % 11 = 7
106 % 11 = 7
128 % 11 = 7

STL → Sets: →

* Remove duplicates from any data structure → use sets.

Two types:

set → alphabetical or ascending order

#include <set>

unordered_set → Hashing Order. Similar to HashSet in Java.

* Stack ✓
* queue ✓
* list ✓
* map
* set

> hashmap & hashset ordered & unordered

9465

Thursday

Vector / priority-queue

BST → Heaps