CS 312

1. using the following list of numbers, answer the questions below:

2, 4, 6, 26, 28, 30, 60, 80, 140, 146, 147, 148, 149, 150

1. 2, 4, 6, 26, 28, 30, 60, 80, 140, 167, 147, 148
2. 2, 4, 6, 16, 26, 28, 30, 60, 80, 140, 146, 147, 148, 149, 150

2.

3.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| STL template class | Underlying storage | Does it allow repetitions? | Does it automatically sort the items? | Big-O search |
| set<Item> | Binary search tree | No | Yes | O(logn) |
| multiset<Item> | Binary search tree | Yes | Yes | O(logn) |
| vector<Item> | Dynamically realizing array | Yes | No | O(n) |
| list<Item> | Double linked list | Yes | Yes | O(n) |
| stack<Item> | Static array | Yes | No | O(n) |
| queue<Item> | Static array | Yes | No | O(n) |
| map<Key, Item> | Balanced binary search tree | Yes | No | O(logn) |
| multimap<Key, Item> | Balanced Binary search tree | Yes | No | O(logn) |
| hash\_map<key, Item> | Array dynamic | Key – No  Item – Yes | No | O(logn) |
| hash\_multimap<Key, Item> | Dynamic array | Key – No  Item – Yes | No | O(logn) |

4. Output

THE NAMES ARE:

Louis

Zanif

Nusrath

Gregory

5. Output

44

43

42

41

41

6. Output

ACTORS AND THEIR MOVIES:

Chris Evans - The Avengers

Chris Evans - The Avengers: Age of Ultron

Hugh Jackman - X-Men

Hugh Jackman - The Wolverine

Scarlett Johansson - The Avengers

Scarlett Johansson - The Avengers: Age of Ultron

7. Output

AREA CODES:

Alaska - 907

California - 209

California - 310

Delaware - 302

New York - 212

New York - 716

New York – 917

8. Output

AREA CODES:

Alaska - 907

California - 209

Delaware - 302

New York – 212

9. Output

There are 4 books in your wish list. The first book on the list is: Moby Dick

I will remove it

The first book on the list now is: The Odyssey

10. Output

There are 4 books in your wish list. The first book on the list is: To Kill a Mockingbird

I will remove it

The first book on the list now is: The Great Gatsby

11.

#include <vector>

#include <iostream>

using namespace std;

vector < string > vector1 = {"Ahmed, Nusrath", "Ebba, Otoi", "James, Jonathan", “Lalanne, Stanley”, “Turbi, Joel”, “Pryce,Rayona”};

vector < string > vector2 = {Ahmed Nusrath, Ebba Otoi, James Jonathan, Lalanne Stanley, Rodriguez Elvis, Casado Luis, Turbi Joel, Pryce Rayona};

vector < string > result = validateUsers(vector1, vector2);

for (int i = 0, i < result size(): i++) {

cout < < result[i];

}

}