ASSIGNMENT NO: 5

Aim

Implementation of STL in C++

Problem Statement

A shop maintains the inventory of items. It stores information of items like Item_Code, Item_Name, Quantity and Cost of it in a list of STL. Whenever Customer wants to buy an item, sales person inputs the Item_Code and/or Item_Name and the system searches in a file and displays whether it is available or not otherwise an appropriate message is displayed. If it is, then the system displays the item details and request for the quantity of items required. If the requested quantity of items are available, the total cost of items is displayed; otherwise the message is displayed as required items not in stock. After purchasing an item, system updates the list.

Design a system using a class called Items with suitable data members and member functions. Implement menu driven C++ program for the inventory system using STL list.

Objectives:

1. To understand the use of Standard Template Library.

2. To get familiar with list containers and iterators

Theory:

Explain following concepts with their syntax and appropriate example in C++

- Concept of Standard Template Library

- How STL is it different from the C++ Standard Library?

- Explain concept of containers, iterators and Algorithms with suitable examples

Platform:

- Windows / 64-bit Open source Linux or its derivatives.

- Eclipse IDE with C++.

Input:

Students should write input provided

Output:

Students should write output obtained

Conclusion:

Thus, learnt the use of STL in C++ and performed list operations.

FAQs:

1. What are class templates? How are they created? What is the need for class templates?
2. Create a template for bubble sort functions.
3. Explain with example, how Function Templates are implemented?
4. Explain with example how can a class template be created.
5. Explain Generic functions and Generic class.

*Attach copy of Implemented C++ Code along with output.