**ASSIGNMENT 6**

**PROBLEM STATEMENT:**

Create a class template to represent a generic vector. Include following member functions:

i. To create the vector.

ii. To modify the value of a given element

iii. To multiply by a scalar value

iv. To display the vector in the form (10,20,30,…)

**AIM OF ASSIGNMENT:**

Develop a C++ Program to implement and understand the concepts of STL Containers (Standard Template Library) . Understand the implementation of vectors to create a vector,display elements , Insert ,Modify and Multiply elements of vector by using iterators.

**DESCRIPTION:**

In this program, we have developed a menu driven code that lets us to create a vector by using **STL Library (vector.h)** store elements in it using predefined vector function **push\_back()**. We have also defined a display function to display the elements in the vector using vector function **v.size()** . Insert option is added to insert an element in the vector at the desired position by using **iterator** and **insert()** function that intially points to beginning of vector( v.begin()). Modify option to modify an element at the desired position and Multiply option to multiply all the elements in the vector by a scalar has also been included.

**OOP CONCEPT USED:**

* Standard Template Library (STL) vector.h
* Vector Functions (push\_back () , size() , assign() ,insert() )
* Iterators
* do while loop
* Menu driven statements

**CONCLUSION:**

In this program we learnt the concept of STL LIbrary and understood the use of predefined vector functions in the library for implementation of vectors.