**Assignment No: 7**

**Problem Statement:** Using standard template library (STL) list container implement following member functions of list class: empty, insert, reverse, sort, Unique, using iterator

**Aim of Assignment:** Understand the concept of STL List

**Description:**

1. **List:-** Lists are sequence containers that allow non-contiguous memory allocation. As compared to vector, list has slow traversal, but once a position has been found, insertion and deletion are quick. Normally, when we say a List, we talk about doubly linked list. For implementing a singly linked list, we use forward list.
2. **Iterator:-**
3. front() – Returns the value of the first element in the list.
4. back() – Returns the value of the last element in the list .
5. push\_front(g) – Adds a new element ‘g’ at the beginning of the list .
6. push\_back(g) – Adds a new element ‘g’ at the end of the list.
7. empty() – Returns whether the list is empty(1) or not(0).
8. insert() – Inserts new elements in the list before the element at a specified position.
9. erase() – Removes a single element or a range of elements from the list.
10. sort() method sorts the given list. It does not create new sorted list but changes the position of elements within an existing list to sort it. This method has two variations :
11. sort() method sorts the given list. It does not create new sorted list but changes the position of elements within an existing list to sort it. This method has two variations :

**OOP Concept Used:**

1. STL List

**Conclusion:** In this experiment we have learnt regarding new concepts OOP Of STL