**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:**

C++ Program to implement and understand the concepts of list container. Include the list and iterator class, to use member function of list.

**DESCRIPTION:**

In this program, firstly we included the list and iterator class. We created two objects of list class (g & l1) and defined a function to display the list using iterator. We used member functions like begin(), end(), empty(), push\_back(), pop\_front(), front(), back(), reverse(), sort(), unique().

**OOP CONCEPT USED:**

* list class
* iterator class
* member functions of list class
* user defined functions.

**SOURCE CODE:**

#include<iostream>

#include<list>

using namespace std;

int display(list<int> &l)

{

list<int>::iterator itr;

for(itr=l.begin();itr!=l.end();++itr)

{

cout<<\*itr;

cout<<" ";

}

return 0;

}

int main()

{

int value;

list<int> l1(3);

list<int> l2(5);

cout<<"\n\nAdd at the back\n";

for(int i=0;i<5;i++)

{

cin>>value;

l1.push\_back(value);

l2.push\_back(value+5);

}

display(l1);

cout<<" ";

display(l2);

cout<<" ";

cout<<"\n\nSort list1 and list2\n";

l1.sort();

l2.sort();

display(l1);

cout<<" ";

display(l2);

cout<<" ";

cout<<"\n\nMerge two lists\n";

l1.merge(l2);

display(l1);

cout<<" ";

cout<<"\n\nAdd at the front\n";

for(int i=0;i<5;i++)

{

cin>>value;

l1.push\_front(value);

l2.push\_front(value+5);

}

display(l1);

cout<<" ";

display(l2);

cout<<" ";

return 0;

}

**CONCLUSION:**

Hence, we learnt the concept of list for storing the data. It flows random access to data which was not in the case of array.