

**OBJECT ORIENTED PROGRAMMING IN C++
WINTER SEMESTER 2021-22**

ACTIVITY-02

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1. Write a C++ program for lists in STL using the functions:

```
#include <iostream>
#include <list>
using namespace std;
void disp(list <int> L)
{
    list <int>::iterator itr;
    for(itr=L.begin(); itr!=L.end(); ++itr)
    {
        cout<<" "<<*itr;
    }
}
int main()
{
    list <int>::iterator itr;
    list <int> L{1,3,2,4,5};
    list <int> M{6,7,8,9,10};
    cout<<"1. Creating a list:";
    disp(L);
    cout<<endl<<"M: ";
    disp(M);
    cout<<endl<<"2.list after insert() at begin():";
    L.insert(L.begin(),0);
    disp(L);
    cout<<endl<<"2.list after insert() at end():";
    L.insert(L.end(),6);
    disp(L);
    cout<<endl<<"3.list after push_back():";
    L.push_back(7);
    disp(L);
    cout<<endl<<"4.list after push_front():";
    L.push_front(8);
    disp(L);
    cout<<endl<<"5.list after pop_back:";
    L.pop_back();
    disp(L);
    cout<<endl<<"6.list after pop_front:";
    L.pop_front();
    disp(L);
    cout<<endl<<"7.list after reverse():";
    L.reverse();
    disp(L);
}
```

```

cout<<endl<<"8.list after front():";
L.front();
disp(L);
cout<<endl<<"9.list after back():";
L.back();
disp(L);
cout<<endl<<"10.list after size(): "<<L.size();
cout<<endl<<"11.list after empty():";
if(L.empty())
{
    cout<<"list L is empty";
}
else
{
    cout<<"list L is not empty";
}
cout<<endl<<"Elements are :";
disp(L);
cout<<endl<<"12.list after sort():";
L.sort();
disp(L);
cout<<endl<<"13.list after merge():";
L.merge(M);
disp(L);
cout<<endl<<"14.list after emplace():";
cout<<"Enter the position of emplace:";
int a;
cin>>a;
for(int i=1; i<=a; i++)
{
    ++itr;
}
L.emplace(itr,8);
disp(L);
cout<<endl<<"15.list after emplace_front():";
L.emplace_front(10);
disp(L);
cout<<endl<<"16.list after emplace_back():";
L.emplace_back(5);
disp(L);
return 0;
}

```