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//List sequence Container
#include<iostream>
#include<conio.h>
#include<list>  //linear linked list
using namespace std;
void display(list <int> &);   // display function prototype
int main()
{
      list <int> list1;       //empty list1 of zero length
      list <int> list2;       //empty list2
      list <int> list3;

      cout<<"\n\nsize of list1 = "<<list1.size();

      list1.push_front(2);
      list1.push_front(1);
      list1.push_back(3);
      list1.push_back(4);  //1234

      cout<<"\n\nList1 elements after push_front() and push_back() :";
      display(list1);

      //Remove an element from front end
      list1.pop_front();            // same way pop_back()
      cout<<"\n\nAfter removing front element of list1 : ";
      display(list1); //234

      //insert an element(1) at the begining of list1
      list1.insert(list1.begin(),1);
      cout<<"\n\nAfter inserting an element at begining of list1 : ";
      display(list1); //1234

      // pushing elements in list2
      list2.push_front(5);
      list2.push_front(6);
      list2.push_back(9);
      list2.push_back(8);
      list2.push_back(7);  // 65987

      cout<<"\n\nList2 elements after push_front() and push_back() :";
      display(list2);

      //sorting list2 elements
      list2.sort();

      cout<<"\n\nList2 elements after sorting :";
      display(list2);  //56789

      //splice(insert) the elements of list2 at the end of list1
      list1.splice(list1.end(),list2);    // similarly splice could be at begin()
also

      cout<<"\n\nList1 elements after splicing :";
      display(list1);  //123456789

      //merging list1 contents into list3
      list3.merge(list1);
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	cout<<"\n\nList3 elements after merging :";
	display(list3);

	//reverse a list
	list3.reverse();

	cout<<"\n\nList3 elements after reversing :";
	display(list3);

	list3.push_back(9);
	list3.push_back(9);

	cout<<"\n\nUpdated list3 elements :";
	display(list3);

	//Removing duplicates from list3 elements
	list3.unique();

	cout<<"\n\nAfter removing duplicates from list3 elements are :";
	display(list3);

	//remove all 9's from list3
	list3.remove(9);

	cout<<"\n\nAfter removing all 9's from list3 elements :";
	display(list3);

	//using swap() function
	list2.swap(list3);

	cout<<"\n\nAfter swapping list2 : ";
	display(list2);

	cout<<"\n\nAfter swapping list3 : ";
	display(list3);

	//Using assign() function
	list3.assign(list2.begin(),list2.end());

	cout<<"\n\nAfter assiging list2 elements to lsit3 :";
	display(list3);


	getch();
	return 0;
}
void display(list <int> & v)
{
	list<int> :: iterator p;
	for(p = v.begin(); p!=v.end(); ++p)
		cout<<" "<<*p;
}
```