

AIM: Develop a C++ program to implement List, Vector and its Operations.

PROGRAM: VECTOR:

```
#include<iostream>

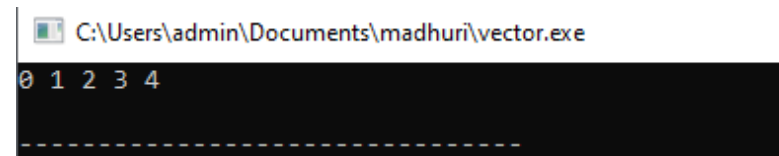
#include<vector>

using namespace std;

int main()
{
    int i;
    vector<int>ivec;
    for(i=0;i<5;i++)
    {
        ivec.push_back(i);
    }
    vector<int>::iterator it;
    for(it=ivec.begin();it!=ivec.end();++it)
    {
        cout<<*it<<" ";
    }

    cout<<endl;
```

OUTPUT:



PROGRAM: LIST

```
#include<iostream>

#include<list>

using namespace std;

int main()

{

    list<int>l1,l2;

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

    {

        l1.push_back(i);

    }

    for(int i=10;i<15;i++)

    {

        l2.push_back(i);

    }

    list<int>::iterator it1;

    cout<<"list 1:";

    for(it1=l1.begin();it1!=l1.end();++it1)

    {

        cout<<*it1<<" ";

    }

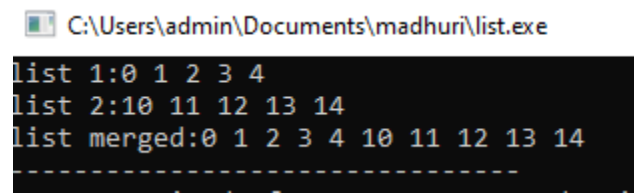
    cout<<endl;

    list<int>::iterator it2;

    cout<<"list 2:";
```

```
for(it2=l2.begin();it2!=l2.end();++it2)
{
    cout<<*it2<<" ";
}
cout<<endl;
l1.merge(l2);
cout<<"list merged:";
for(it1=l1.begin();it1!=l1.end();++it1)
{
    cout<<*it1<<" ";
}
}
```

OUTPUT:



```
C:\Users\admin\Documents\madhuri\list.exe
list 1:0 1 2 3 4
list 2:10 11 12 13 14
list merged:0 1 2 3 4 10 11 12 13 14
-----
```

AIM: Develop a C++ program to implement Deque and Deque Operations.

PROGRAM:

```
#include<iostream>


#include<deque>

using namespace std;

int main()
{
    deque<int>deq;
    for(int i=1;i<=5;i++)
    {
        deq.push_front(i);
        deq.push_back(i*5);
    }
    deque<int>::iterator d;
    for(d=deq.begin();d!=deq.end();++d)
    {
        cout<<*d<<" ";
    }
    cout<<endl;
    d=deq.begin();
    d++;
    deq.insert(d,1,34);
    for(d=deq.begin();d!=deq.end();++d)
    {
        cout<<*d<<" ";
```

```
    }  
    cout<<endl;  
    deq.pop_back();  
    deq.pop_front();  
    for(d=deq.begin();d!=deq.end();++d)  
    {  
        cout<<*d<<" ";  
    }  
}
```

OUTPUT:

 C:\Users\admin\Documents\madhuri\deque2.exe

```
5 4 3 2 1 5 10 15 20 25  
5 34 4 3 2 1 5 10 15 20 25  
34 4 3 2 1 5 10 15 20  
-----
```

AIM: Develop a C++ program to implement Map and Map Operations.

PROGRAM:

```
#include<iostream>

#include<map>

#include<string.h>

using namespace std;

int main()

{

    map<int,string>m1;

    m1.insert(make_pair(2805,"james"));

    m1.insert(make_pair(2802,"smith"));

    m1.insert(make_pair(2801,"scott"));

    m1.insert(make_pair(2807,"miller"));

    m1.insert(make_pair(2804,"joy"));

    m1.insert(make_pair(2806,"john"));

    m1.insert(make_pair(2801,"sam"));

    m1.insert(make_pair(2803,"bob"));

    map<int,string>::iterator pos;

    cout<<"empid"<<"\t"<<"name"<<endl;

    for(pos=m1.begin();pos!=m1.end();++pos)

    cout<<pos->first<<"\t"<<pos->second<<endl;

    pos=m1.find(2803);

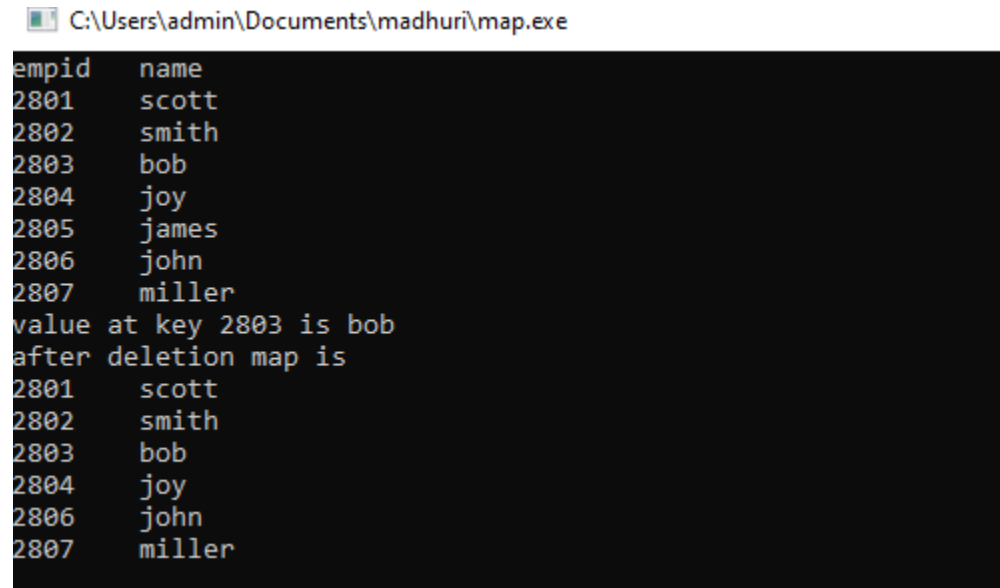
    cout<<"value at key 2803 is "<<pos->second<<endl;

    m1.erase(2805);

    cout<<"after deletion map is"<<endl;
```

```
for(pos=m1.begin();pos!=m1.end();++pos)
    cout<<pos->first<<"\t"<<pos->second<<endl;
return 0;
}
```

OUTPUT:



```
C:\Users\admin\Documents\madhuri\map.exe
empid    name
2801     scott
2802     smith
2803     bob
2804     joy
2805     james
2806     john
2807     miller
value at key 2803 is bob
after deletion map is
2801     scott
2802     smith
2803     bob
2804     joy
2806     john
2807     miller
```