

```
1  #include<bits/stdc++.h>
2  #include<vector>
3  using namespace std;
4  int main()
5  {   vector<int>v;
6      int element;
7      for(int i=1; i<=5; i++)
8      {
9          cin>>element;
10         v.push_back(element);
11     }
12     for(int i=0; i!=v.size(); i++)
13     {
14         cout<<v[i]<<" ";
15     }
16     cout<<endl;
17     v.pop_back();
18     for(int i=0; i!=v.size(); i++)
19     {
20         cout<<v[i]<<" ";
21     }
22     v.insert(v.begin()+1,99);
23     cout<<endl;
24     for(int i=0; i!=v.size(); i++)
25     {
26         cout<<v[i]<<" ";
27     }
28     v.erase(v.begin()+3);
29     cout<<endl;
30     for(int i=0; i!=v.size(); i++)
31     {
32         cout<<v[i]<<" ";
33     }
34 }
35
```



Search



```
1  #include<bits/stdc++.h>
2  using namespace std;
3  void erase(int arr[],int ele_index)
4  {
5      for(int i=ele_index-1; i<10; i++)
6      {
7          arr[i]=arr[i+1];
8      }
9      for(int i=0; i<10-1; i++)
10     {
11         cout<<arr[i]<<" ";
12     }
13     cout<<endl;
14 }
15 void insert(int arr[],int pos,int element)
16 {
17     if(pos>10)
18     {
19
20         cout<<"Invalid ";
21     }
22     else
23     {for(int i=10; i>=pos; i--)
24     {
25         arr[i]=arr[i-1];
26     }
27     arr[pos-1]=element;
28     for(int i=0; i<10+1; i++)
29     {
30         cout<<arr[i]<<" ";
31     }cout<<endl;
32 }
33 }
34
35
36 }
```



```
37 void pushback(int arr[])
38 {
39
40     int val,i;
41     cin>>val; //enter value
42     arr[10]=val;
43     for(i=0; i<=10; i++)
44     {
45         cout<<arr[i]<<" ";
46     }
47     cout<<endl;
48
49
50 }
51 void pop_back(int arr[])
52 {
53
54     for(int i=0; i<10; i++)
55     {
56         cout<<arr[i]<<" ";
57     }
58     cout<<endl;
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```



```
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72
73 int main()
74 {
75     int arr[10] = {0,1,2,3,4,5,6,7,8,9};
76     for(int i=0; i<10; i++)
77     {
78         cout<<arr[i]<<" ";
79     }
80     cout<<endl;
81
82     int choice;
83     cin>>choice;
84     if(choice==1)
85     {
86         int ele_index;
87         cin>>ele_index; //the index number of the element to delete
88         erase(arr, ele_index);
89     }
90
91
92     if(choice==2)
93     {
94         int pos, element;
95         cin>>pos>>element;
96         insert(arr, pos, element);
97     }
98
99
100     pop_back(arr);
101     pushback(arr);
102
103
104 }
105
```



```
1  #include<bits/stdc++.h>
2  #include<iterator>
3  #include<vector>
4  using namespace std;
5  int main()
6  {
7      vector<int> arr = {1,2,3,4,5};
8      vector<int>::iterator it; //declare iterator
9      for (it = arr.begin(); it < arr.end(); it++)
10     {
11
12         cout << *it << " ";
13
14     }
15     cout << endl;
16     it=arr.erase(arr.begin()+2); //deleting 3rd element
17     for (it = arr.begin(); it < arr.end(); it++)
18     {
19
20         cout << *it << " ";
21
22     }
23     return 0;
24 }
25
```



Search



```
1  #include<bits/stdc++.h>
2  #include<utility>
3  using namespace std;
4  bool sort_sec(const pair<int,int> &p1,const pair<int,int> &p2)
5  {
6      return (p1.second < p2.second);
7  }
8  int main()
9  {
10     vector<pair<int,int>>vp;//vector of pairs
11     //push back element in vector
12     vp.push_back(make_pair(1,50));
13     vp.push_back(make_pair(5,30));
14     vp.push_back(make_pair(3,20));
15     vp.push_back(make_pair(9,10));
16     vp.push_back(make_pair(-2,90));
17     vp.push_back(make_pair(-7,-60));
18     vp.push_back(make_pair(2,100));
19     // before sorting
20     for(int i=0;i<7;i++)
21     {
22         cout<<vp[i].first<<" || "<<vp[i].second<<endl;
23     }
24     cout<<endl<<"----X----"<<endl;
25     //sort in ascending
26     sort(vp.begin(), vp.end(), sort_sec);
27     // after sorting
28     for(int i=0;i<7;i++)
29     {
30         cout<<vp[i].first<<" || "<<vp[i].second<<endl;
31     }
32 }
```

```
1  #include<bits/stdc++.h>
2  #include<map>
3  using namespace std;
4  int main()
5  {
6      map<int,int>m;
7      cout << " Initially m.empty(): " << m.empty() << "\n";//to check whether the map container is empty or not
8      m.insert({2,20}); // (key,value)
9      m.insert({3,50});
10     m.insert({4,60});
11     m.insert({6,70});
12     m.insert({7,40});
13     m.insert({5,30});
14     for(auto it: m)
15     {
16         cout<<it.first<<" "<<it.second<<endl;
17     }
18     cout<<endl<<"----"<<endl;
19     //erase
20     m.erase(2);
21     m.erase(6);
22     for(auto it: m)
23     {
24         cout<<it.first<<" "<<it.second<<endl;
25     }
26     cout<<endl<<"---"<<endl;
27     //find function
28     auto it = m.find(5);
29     auto it1 = m.find(4);
30     if (it != m.end())
31     {
32         cout << it->second << '\n';
33         cout << it1->second << '\n';
34     }
35     cout << "\n After adding elements, m.empty(): " << m.empty() << "\n";
36 }
```



1.4 task part 2.cpp - Code::Blocks 20.03

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Start here x 1.4 task part 2.cpp x

```
1  #include<bits/stdc++.h>
2  using namespace std;
3  void find(int a[], int k)
4  {
5      int i,flag=0;;
6      for(i=0; i<n; i++)
7      {
8          if(a[i]==k)
9          {
10             flag++;
11             break;
12         }
13     }
14     if(flag==0)
15         cout<<"Key not found"<<endl;
16     else
17         cout<<"Key found at index "<<i<<endl;
18 }
19
20 void empty(int a[],int arr[])
21 {
22     int i,count=0,flag=0;
23     for(i=0; i<n; i++)
24     {
25         if(a[i]!='\0')
26             count++;
27         if(count==0)
28             cout<<"Empty"<<endl;
29         else
30         {
31             cout<<"Not empty"<<endl;
32         }
33     }
34 }
35
```

D:\labtask 1-2\lab 5 after pro\1.4 task part 2.cpp

C/C++ Windows (CR+LF) WINDOWS-1252 Line 1, Col 1, Pos 0 Insert Read/Write default

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```
1  #include<bits/stdc++.h>
2  #include<set>
3  using namespace std;
4  int main()
5  {
6      set<int,greater<int>>s;
7      set<int,greater<int>>::iterator it;//descending order
8      s.insert(50);
9      s.insert(40);
10     s.insert(30);
11     s.insert(30);
12     s.insert(60);
13     for(it=s.begin();it!=s.end();it++)
14     {
15         cout<<"it<<" ";
16     }
17
18     cout<<endl;
19     if (s.count(40))
20         cout << "40 is present in the set\n";
21     else
22         cout << "40 is not present in the set\n";
23 }
24
```



Search



12:04 AM

12/7/2020





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54
55
56 //find function
57 auto it = m.find(5);
58 auto it1 = m.find(4);
59
60 if (it != m.end())
61 {
62     cout << it->second << '\n';
63     cout << it1->second << '\n';
64 }
65 cout << "\n After adding elements m.empty(): " << m.empty() << "\n";
66
67 }
68
69
```



Search



12:05 AM

12/7/2020



```
1  #include<bits/stdc++.h>
2  using namespace std;
3  void insert(int n,int arr[])
4  {
5
6      int i,pos,value;
7      cin>>pos>>value;
8      for(i=n; i>=pos; i--)
9      {
10         arr[i]=arr[i-1];
11     }
12     arr[pos-1]=value;
13
14     for(i=0; i<n+1; i++)
15     {
16         cout<<arr[i]<<" ";
17     }
18     cout<<endl;
19 }
20 void count(int n, int arr[])
21 {
22
23     int i,flag=0,value;
24     cin>>value;
25     for(i=0; i<n; i++)
26     {
27
28         if(arr[i]==value)
29         {
30             flag=1;
31             break;
32         }
33     }
34     if(flag==1)
35     {
36
```

```
19     cout<<endl;
20 }
21 void count(int n, int arr[])
22 {
23
24     int i,flag=0,value;
25     cin>>value;
26     for(i=0; i<n; i++)
27
28     {
29         if(arr[i]==value)
30         {
31             flag=1;
32             break;
33         }
34     }
35     if(flag==1)
36     {
37         cout<<value<<" is present";
38     }
39     else
40     {
41         cout<<value<<" isn't present";
42     }
43 }
44
45 int main()
46 {
47
48     int n,i;
49     int arr[10000];
50     cin>>n;
51     for(i=0; i<n; i++)
52     {
53         cin>>arr[i];
54     }
```



Search



12:06 AM

12/7/2020

```
24     int i, flag=0, value;
25     cin>>value;
26     for(i=0; i<n; i++)
27     {
28         if(arr[i]==value)
29         {
30             flag=1;
31             break;
32         }
33     }
34     if(flag==1)
35     {
36         cout<<value<<" is present";
37     }
38     else
39     {
40         cout<<value<<" isn't present";
41     }
42 }
43
44
45 int main()
46 {
47
48     int n, i;
49     int arr[10000];
50     cin>>n;
51     for(i=0; i<n; i++)
52     {
53         cin>>arr[i];
54     }
55     insert(n, arr);
56     count(n, arr);
57 }
58
```

