Problem-1:

```cpp
#include<iostream>
using namespace std;
#define MAX_L 10000
typedef struct
{
    int *elem;
    int length;
}SeqList;
SeqList SL;
void InitList(SeqList &SL, int n)
{
    int x, i;
    SL.elem = new int[MAX_L];
    for (i = 0; i < n; i++)
    {
        cin >> x;
        SL.elem[i] = x;
        SL.length++;
    }
}
void PrintList(SeqList &SL, int n)
{
    for (int i = 0; i < SL.length; i++)
        if (i == 0)
            cout << SL.elem[i];
        else
            cout << " " << SL.elem[i];
    cout << endl;
}
void  InsertList(SeqList &SL, int elem, int i)
{
    if (i<1 || i>SL.length + 1)
        cout << -1 << endl;
    else
    {
        for (int j = SL.length - 1; j >= i - 1; j--)
            SL.elem[j + 1] = SL.elem[j];
        SL.elem[i - 1] = elem;
        SL.length++;
        for (int j = 0; j < SL.length; j++)
            if (j == 0)
                cout << SL.elem[j];
```

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            else
                cout << " " << SL.elem[j];
        cout << endl;
    }
}
void DelList(SeqList &SL, int j)
{
    if (j<1 || j>SL.length)
        cout << -1 << endl;
    else
    {
        for (int i = j; i < SL.length; i++)
            SL.elem[i - 1] = SL.elem[i];
        SL.length--;
        for (int i = 0; i < SL.length; i++)
            if (i == 0)
                cout << SL.elem[i];
            else
                cout << " " << SL.elem[i];
        cout << endl;
    }
}
int SearchList(SeqList &SL, int y)
{
    for (int i = 0; i < SL.length; i++)
        if (SL.elem[i] == y)
            return i + 1;
    return -1;
}
void ClrList(SeqList &SL)
{
    delete[]SL.elem;
}
int main()
{
    int n, i, j, x, y;
    cin >> n;
    InitList(SL, n);
    cin >> i >> x;
    cin >> j;
    cin >> y;
    PrintList(SL, n);
    InsertList(SL, x, i);
    DelList(SL, j);
```

```cpp
    cout << SearchList(SL, y) << endl;
    ClrList(SL);
    return 0;
}
```

Problem-2:

```cpp
#include<iostream>
using namespace std;
#define MAX_L 10000
typedef struct
{
    int *elem;
    int length;
}SeqList;
SeqList SL;
void InitList(SeqList &SL)
{
    int x, i = 0;
    SL.elem = new int[MAX_L];
    while (1)
    {
        cin >> x;
        if (x == 0)
            break;
        SL.elem[i] = x;
        SL.length++;
        i++;
    }
}
void  InsertList(SeqList &SL, int e)
{
    int i = 0;
    while (SL.elem[i] > 0 && SL.elem[i] < e)i++;
    if (i < SL.length)
    {
        for (int j = SL.length - 1; j >= i - 1; j--)
            SL.elem[j + 1] = SL.elem[j];
        SL.elem[i] = e;
    }
    else
        SL.elem[i] = e;
    cout << i + 1 << endl;
    SL.length++;
}
```

```cpp
void DelList(SeqList &SL, int e)
{
    int i, flag = 0, j;
    for (i = 0; i < SL.length; i++)
    {
        flag = 0;
        if (SL.elem[i] == e)
        {
            j = i + 1;
            flag = 1;
            break;
        }
    }
    if (flag == 1)
    {
        for (i = j; i < SL.length; i++)
            SL.elem[i - 1] = SL.elem[i];
        SL.length--;
        cout << j << endl;
    }
    if (flag == 0)
        cout << -1 << endl;
}
void SortList(SeqList &SL)
{
    int temp;
    for (int i = 0; i < SL.length - 1; i++)
        for (int j = 0; j < SL.length - i - 1; j++)
            if ((SL.elem[j] > SL.elem[j + 1]) && SL.elem[j + 1] > 0)
            {
                temp = SL.elem[j];
                SL.elem[j] = SL.elem[j + 1];
                SL.elem[j + 1] = temp;
            }
}
void PrintList(SeqList &SL)
{

    for (int i = 0; i < SL.length; i++)
        if (i == 0)
            cout << SL.elem[i];
        else
            cout << " " << SL.elem[i];
    cout << endl;
```

```cpp
}
void ClrList(SeqList &SL)
{
    delete[]SL.elem;
}
int main()
{
    InitList(SL);
    SortList(SL);
    int e1, e2;
    cin >> e1;
    cin >> e2;
    InsertList(SL, e1);
    DelList(SL, e2);
    PrintList(SL);
    ClrList(SL);
    return 0;
}
```

Problem-3：

```cpp
#include<iostream>
using namespace std;
#define MAX_L 10000
#define MAX_LC 20000
typedef struct
{
    int *elem;
    int length;
}SeqList;
SeqList SLA, SLB, SLC;
int c = 0;
void InitList(SeqList &SL)
{
    int x, i = 0;
    SL.elem = new int[MAX_L];
    while (1)
    {
        cin >> x;
        if (x == 0)
            break;
        SL.elem[i] = x;
        SL.length++;
        i++;
    }
```

```cpp
}
void SortList(SeqList &SL)
{
    int temp;
    for (int i = 0; i < SL.length - 1; i++)
        for (int j = 0; j < SL.length - i - 1; j++)
            if ((SL.elem[j] > SL.elem[j + 1]) && SL.elem[j + 1] > 0)
            {
                temp = SL.elem[j];
                SL.elem[j] = SL.elem[j + 1];
                SL.elem[j + 1] = temp;
            }
}
void InsertList(SeqList &Lc, int e)
{
    Lc.elem[c++] = e;
    Lc.length++;
}
void CmbList(SeqList &La, SeqList &Lb, SeqList &Lc)
{
    Lc.elem = new int[MAX_LC];
    int a = 0, b = 0;
    while (a < La.length&&b < Lb.length)
    {
        if (La.elem[a] < Lb.elem[b])
        {
            InsertList(Lc, La.elem[a]);
            a++;
        }
        else
        {
            InsertList(Lc, Lb.elem[b]);
            b++;
        }
    }
    while (a < La.length)
    {
        InsertList(Lc, La.elem[a]);
        a++;
    }
    while (b < Lb.length)
    {
        InsertList(Lc, Lb.elem[b]);
        b++;
```

```cpp
        }
    }
    void PrintList(SeqList &SL)
    {

        for (int i = 0; i < SL.length; i++)
            if (i == 0)
                cout << SL.elem[i];
            else
                cout << " " << SL.elem[i];
        cout << endl;
    }
    void ClrList(SeqList &SL)
    {
        delete[]SL.elem;
    }
    int main()
    {
        InitList(SLA);
        SortList(SLA);
        InitList(SLB);
        SortList(SLB);
        CmbList(SLA, SLB, SLC);
        PrintList(SLC);
        ClrList(SLA);
        ClrList(SLB);
        ClrList(SLC);
        return 0;
    }
```

Problem-4：

```cpp
#include<iostream>
using namespace std;
#define MAX_L 1000000
typedef struct
{
    int *elem;
    int length;
}SeqList;
SeqList SL;
void InitList(SeqList &SL, int n)
{
    int x, i = 0;
    SL.elem = new int[MAX_L];
```

```cpp
    while (i < n)
    {
        cin >> x;
        SL.elem[i++] = x;
        SL.length++;
    }
}
void PrintList(SeqList &SL)
{
    for (int i = 0; i < SL.length; i++)
        if (SL.elem[i] != 0 && SL.elem[i] > 0)
            cout << SL.elem[i] << " ";
    cout << endl;
}
void DelList(SeqList &SL, int e)
{
    int flag = 0;
    for (int i = 0; i < SL.length; i++)
    {
        flag = 0;
        if (SL.elem[i] == e)
        {
            flag = 1;
            break;
        }
    }
    if (flag == 1)
    {
        for (int i = 0; i < SL.length; i++)
            if (SL.elem[i] == e)
                SL.elem[i] = 0;
        PrintList(SL);
    }
    if (flag == 0)
        cout << -1 << endl;
}
void ClrList(SeqList &SL)
{
    delete[]SL.elem;
}
int main()
{
    int n;
    cin >> n;
```

```cpp
    InitList(SL, n);
    int e;
    cin >> e;
    DelList(SL, e);
    ClrList(SL);
    return 0;
}
```

Problem-5：

```cpp
#include<iostream>
using namespace std;
#define MAX_L 1000000
typedef struct
{
    int *elem;
    int length;
}SeqList;
SeqList SL;
void InitList(SeqList &SL, int n)
{
    int x, i = 0;
    SL.elem = new int[MAX_L];
    while (i < n)
    {
        cin >> x;
        SL.elem[i++] = x;
        SL.length++;
    }
}
void PrintList(SeqList &SL)
{
    for (int i = 0; i < SL.length; i++)
        if (SL.elem[i] != 0 && SL.elem[i] > 0)
            cout << SL.elem[i] << " ";
    cout << endl;
}
void Rev_same(SeqList &SL)
{
    int *only;
    only = new int[MAX_L];
    int k = 0, t = 1, flag = 0, i, j;
    only[0] = SL.elem[0];
    for (i = 1; i < SL.length; i++)
    {
```

```cpp
        flag = 1;
        for (j = 0; j < t; j++)
            if (only[j] == SL.elem[i])
            {
                flag = 0;
                break;
            }
        if (flag == 1)
            only[t++] = SL.elem[i];
    }
    for (int i = 0; i < t; i++)
        cout << only[i] << " ";
    delete[]only;
}
void ClrList(SeqList &SL)
{
    delete[]SL.elem;
}
int main()
{
    int n;
    cin >> n;
    InitList(SL, n);
    Rev_same(SL);
    ClrList(SL);
    return 0;
}
```