Array deletion:

We have declared an array of “int” type named “mimo” of size “10” but we have initialized “8” values (from index “0” to index “7”).

```
int k, i, n=7, mimo[10]={1, 2, 3, 4, 5, 6, 7, 8}; //n=total elements.
cout<<"Before deletion:";
for(i=0; i<10; i++)       //printing all the values in the array after insert
    cout<<mimo[i];
cout<<"\n";
```

So, before any deletion let us see the output:

```
F:\test\bin\Debug\test.exe
Before deletion:1234567800
```

From the above output it can be seen that if we print the whole array of size 10 (from index “0” to “9”) first we get the initialized values 12345678 as we have initialized “8” values (from index “0” to index “7”) and as we are printing the whole array of size 10 (from index “0” to “9”), it can be seen that in C++ the default value of uninitialized “int” elements is “0” so we get 00 output for rest of the uninitialized elements. So, our total output is 1234567800.

I have mentioned that we need to assign “NULL” to delete the last element. So if we assign “NULL” to index “7”, the last initialized element will be deleted and by default the value will become “0”.

```
// delete 8 (index 7), last element
    mimo[7]=NULL;
    cout<<"After deletion of last element:";
    for(i=0; i<10; i++)       //printing all the values in the array after insert
      cout<<mimo[i];
    cout<<"\n";
```

So, the output is:

```
F:\test\bin\Debug\test.exe
Before deletion:1234567800
After deletion of last element:1234567000
```

The last element is deleted and by default the value has become “0”.

For the deletion first element we just need to shift the array elements from right to left meaning shift all the values one index backward. The value in index “2” goes to “1”, “3” goes to “2: ,…, “n”th goes to “(n-1)”th.

```
// delete 1 (index 0), first element
 for(i=0; i<n; i++)  //shift all the values one index backward. The value in index
     mimo[i] = mimo[i+1]; //2 goes to 1, 3 goes to 2,…, nth goes to (n-1)th.
 cout<<"After deletion of first element:";
 for(i=0; i<10; i++)       //printing all the values in the array after insert
   cout<<mimo[i];
 cout<<"\n";
```

Output:

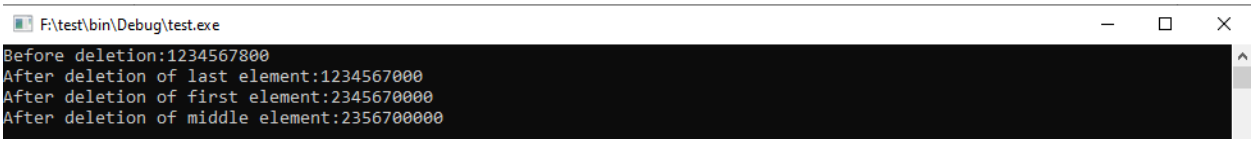
So, the first element is deleted.

For the deletion middle element again we just need to shift the array elements from right to left meaning shift all the values one index backward. But upto the middle point, in case of our program upto “k” or “2”.

```
k = 2; // delete value 4 from the middle (index k=2) of the array

for(i=k; i<n; i++)       //shift all the values one index backword. i.e. the value
    mimo[i] = mimo[i+1]; //in index k+1 goes to k,…, nth goes to (n-1)th.
cout<<"After deletion of middle element:";
for(i=0; i<10; i++)      //printing all the values in the array after insert
  cout<<mimo[i];
cout<<"\n";
```

So, our final output is:



This is an example where we get the basic idea of deleting an element of an array assuming we know the index number upto which our array is initialized, middle index number of our array.

The code is given bellow:

```
int k, i, n=7, mimo[10]={1, 2, 3, 4, 5, 6, 7, 8}; //n=total elements.


   cout<<"Before deletion:";
   for(i=0; i<10; i++)     //printing all the values in the array after insert
      cout<<mimo[i];
   cout<<"\n";
// delete 8 (index 7), last element
   mimo[7]=NULL;
   cout<<"After deletion of last element:";
   for(i=0; i<10; i++)     //printing all the values in the array after insert
     cout<<mimo[i];
   cout<<"\n";
// // delete 1 (index 0), first element
```

```
for(i=0; i<n; i++)  //shift all the values one index backward. The value in index
   mimo[i] = mimo[i+1]; //2 goes to 1, 3 goes to 2,…, nth goes to (n-1)th.
cout<<"After deletion of first element:";
for(i=0; i<10; i++)     //printing all the values in the array after insert
  cout<<mimo[i];
cout<<"\n";
k = 2; // delete value 4 from the middle (index k=2) of the array

for(i=k; i<n; i++)     //shift all the values one index backword. i.e. the value
   mimo[i] = mimo[i+1]; //in index k+1 goes to k,…, nth goes to (n-1)th.
cout<<"After deletion of middle element:";
for(i=0; i<10; i++)     //printing all the values in the array after insert
  cout<<mimo[i];
cout<<"\n";
```