Aim:

Write C program to insert and delete the element of one dimensional array

Source Code:

array.c

```c
#include<stdio.h>
#define size 100
int main()
{
    int a[size],num,pos,n,i;
    printf("Enter the size of the array: ");
    scanf("%d",&n);
    printf("Enter the elements of the array:\n");
    for(i=0;i<n;i++)
    {
        scanf("%d",&a[i]);
    }
    printf("Enter the position where you want to insert an element: ");
    scanf("%d",&pos);
    if(pos<0||pos>n)
    {
        return 0;
    }
    else
    {
        printf("Enter the value to insert: ");
        scanf("%d",&num);
        for(i=n;i>=pos;i--)
        {
            a[i]=a[i-1];
        }
        a[pos]=num;
        n++;
        printf("Element inserted successfully!\n");
    }
    printf("Enter the position of the element you want to delete: ");
    scanf("%d",&pos);
    if(pos<=0||pos>n)
        {
            return 0;
        }
        else
        {
            for(i=pos;i<n;i++)
            {
                a[i]=a[i+1];
            }
            n--;
            printf("Element deleted successfully!");
        }
        printf("\nUpdated array:\n");
```

```
        for(i=0;i<n;i++)
        {
            printf("%d ",a[i]);
        }
        printf("\n");
    }
```

Execution Results - All test cases have succeeded!

Test Case - 1
User Output
Enter the size of the array: 4
Enter the elements of the array: 1 5 2 3
Enter the position where you want to insert an element: 2
Enter the value to insert: 11
Element inserted successfully! 4
Enter the position of the element you want to delete: 4
Element deleted successfully!
Updated array:
1 5 11 2

Test Case - 2
User Output
Enter the size of the array: 7
Enter the elements of the array: 11 22 33 44 55 66 77
Enter the position where you want to insert an element: 1
Enter the value to insert: 88
Element inserted successfully! 7
Enter the position of the element you want to delete: 7
Element deleted successfully!
Updated array:
11 88 22 33 44 55 66