Code, Compile & Run

Ide   ✖   +

C (gcc 6.3) ▼   💾   🗑   Code gets autosaved every second

```c
1    #include<stdio.h>
2    void main()
3  ▾ {
4        int n,a[10],i,pos,ele;
5        char ch;
6        printf("Enter the size of array\n");
7        scanf("%d",&n);
8        printf("%d\n",n);
9        printf("Enter the elements of array\n");
10       for(i=0;i<n;i++)
11 ▾     {
12           scanf("%d",&a[i]);
13           printf("%d\t",a[i]);
14       }
15       printf("\nThe array elements are \n");
16       for(i=0;i<n;i++)
17 ▾     {
18           printf("%d\t",a[i]);
19       }
20       printf("\nEnter the choice\n 1 for insertion \t 2 for deletion\n");
21       scanf(" %c",&ch);
22       printf(" %c\n",ch);
23       switch(ch)
24 ▾     {
25         case '1': printf("Enter the postion where new element is inserted\n");
26             scanf("%d",&pos);
27             printf("%d\n",pos);
28             printf("Enter the element to be inserted\n");
29             scanf("%d",&ele);
```

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Code, Compile & Run

Contest Code/Name (e.g. JULY15/PRACTICE)   Problem Code/Name (e.g. TEST)

C (gcc 6.3)   ▼   💾   🗑   Code gets autosaved every second

```
27        printf("%d\n",pos);
28        printf("Enter the element to be inserted\n");
29        scanf("%d",&ele);
30        printf("%d\n",ele);
31        for(i=n-1;i>=pos;i--)
32        {
33            a[i+1]=a[i];
34        }
35        a[pos]=ele;
36        n++;
37        printf("The array after insertion\n");
38        for(i=0;i<n;i++)
39        {
40        scanf("%d",&a[i]);
41        printf("%d\t",a[i]);
42        }
43        break;
44
45    case '2':printf("Enter the position where element is deleted\n");
46        scanf("%d",&pos);
47        printf("%d\n",pos);
48        printf("Enter the element to be deleted\n");
49        scanf("%d",&ele);
50        printf("%d\n",ele);
51        ele=a[pos];
52        for(i=pos;i<n-1;i++)
53        {
54            a[i]=a[i+1];
55        }
```

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Code, Compile & Run

Contest Code/Name (e.g. JULY15/PRACTICE)

Problem Code/Name (e.g. TEST)

C (gcc 6.3) ▼ 💾 🗑 Code gets autosaved every second

```
37      printf( The array after insertion\n );
38      for(i=0;i<n;i++)
39    {
40      scanf("%d",&a[i]);
41      printf("%d\t",a[i]);
42    }
43      break;
44
45    case '2':printf("Enter the position where element is deleted\n");
46      scanf("%d",&pos);
47      printf("%d\n",pos);
48      printf("Enter the element to be deleted\n");
49      scanf("%d",&ele);
50      printf("%d\n",ele);
51      ele=a[pos];
52      for(i=pos;i<n-1;i++)
53    {
54        a[i]=a[i+1];
55    }
56    n--;
57      printf("The array after deletion of element\n");
58      for(i=0;i<n;i++)
59    {
60        printf("%d\t",a[i]);
61    }
62      break;
63    default:printf("invalid choice");
64    }
65  }
```

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Custom Input

```
5
10 20 30 40 50 60
2
50
|
```

Status Runtime error   **Date** 2020-06-05 05:51:21   **Time** 0 sec   **Mem** 9.424 kB

Input

```
5
10 20 30 40 50 60
2
50
```

Output

```
10 20 30 40 50
The array elements are
10  20  30  40  50
Enter the choice
 1 for insertion    2 for deletion
 6
invalid choice
```

Runtime Error

```
NZEC
```

Varshidh
4ALI9IS069

Algorithm

1. start

2. input n

3. display enter array element

   for (i=0; i<n; i++)

      input a[i]

4. enter the choice Z for insertion & for deletion

   input ch

5. switch (ch)

   case '1' : input pos, ele

            for (i=n-1; i>=pass; i--)

            a[i+1] = a[i]

            a[pos] = ele

            n++

            display array after insertion

            for (i=0; i<n; i++)

               output a[i]

   case '2' : input pos, ele

            ele = a[pos]

            for (i>pos; i<n-1; i++)

            a[p] = a[p+1]

            n--

            display Array after deletion

            for (i>0; i<n; i++)

               output a[i]

               break

            default : display Invalid choice.

6. stop

Flowchart

```
        ( Start )
            │
            ▼
   ┌──────────────────┐
   │   input  n       │
   └──────────────────┘
            │
            ▼
   ┌──────────────────────┐
   │ enter array element  │
   │   input  a[p]        │
   └──────────────────────┘
            │
            ▼
   ┌────────────────────────────────┐
   │ enter the choice 1 for insertion│
   │ a 2  for deletion   input ch    │
   └────────────────────────────────┘
            │
            ▼
   ┌──────────────────┐
   │   switch (ch)    │
   └──────────────────┘
            │
            ▼
         ◇ Case 1 ◇ ──── true ──► ┌─────────────────────────┐
            │                     │ input pos. ele          │
            │ false               │ for (p = n-1; i > pos; i=)│
            ▼                     │  a[p+i] = a[i]          │
         ◇ case 2 ◇               │  a[pos] = ele           │
                                  │  n++                    │
                                  │ display Array after     │
                                  │ insertion               │
                                  │  output a[i]            │
                                  │     break               │
                                  └─────────────────────────┘

         ◇ case 2 ◇ ──── true ──► ┌─────────────────────────┐
            │                     │ input pos. ele          │
            │ false               │ ele = a[pos]            │
            ▼                     │ for (i = pos; i < n-1; i++)│
                                  │   a[i] = a[i+1]         │
                                  │   n--                   │
                                  │ Array after deletion    │
                                  │ for (i = 0; i < n; i++) │
                                  │ output a[p]             │
                                  │     break               │
                                  └─────────────────────────┘

         ◇ default ◇ ─── true ──► ┌────────────────────┐
                                  │ invalid  choice    │
                                  └────────────────────┘
                                              │
                                              ▼
                                          ( Stop )
```