

Program for Insertion of an element at specified location in the array

```
#include <stdio.h>
```

```
void main()
```

```
{
```

```
    int array[10];
```

```
    int i, j, n, m, temp, key, pos;
```

```
    printf("Enter how many elements \n");
```

```
    scanf("%d", &n);
```

```
    printf("Enter the elements \n");
```

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

```
    {
```

```
        scanf("%d", &array[i]);
```

```
    }
```

```
    printf("Input array elements are \n");
```

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

```
{  
    printf("%d\n", array[i]);  
}  
for (i = 0; i < n; i++)  
{  
    for (j = i + 1; j < n; j++)  
    {  
        if (array[i] > array[j])  
        {  
            temp = array[i];  
            array[i] = array[j];  
            array[j] = temp;  
        }  
    }  
}  
}
```

```
printf("Sorted list is \n");
```

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

```
{
```

```
    printf("%d\n", array[i]);  
}
```

```
printf("Enter the element to be inserted \n");  
scanf("%d", &key);  
for (i = 0; i < n; i++)  
{  
    if (key < array[i])  
    {  
        pos = i;  
        break;  
    }  
    if (key > array[n-1])  
    {  
pos = n;  
        break;  
    }  
}  
if (pos != n)
```

```
{
    m = n - pos + 1 ;
    for (i = 0; i <= m; i++)
    {
        array[n - i + 2] = array[n - i + 1] ;
    }
}

array[pos] = key;

printf("Final list is \n");
for (i = 0; i < n + 1; i++)
{
    printf("%d\n", array[i]);
}
}
```