

```

1: /*----Insertion Sort Without Loop----*/
2:
3: #include <iostream>
4: using namespace std;
5:
6: int insertion (int arr[], int n, int j, int temp)
7: {
8:     if(j >= 0 && arr[j] > temp)
9:     {
10:         arr[j+1] = arr[j];
11:         return insertion (arr, n, j - 1, temp);
12:     }
13:     return j + 1;
14: }
15:
16: void insertionsort(int arr[], int n, int i)
17: {
18:     if(i < n)
19:     {
20:         int temp = arr[i];
21:         int j = insertion (arr, n, i - 1, temp);
22:         arr[j] = temp;
23:         insertionsort(arr, n, i+1);
24:     }
25: }
26: int main()
27: {
28:     int n;
29:     cout << "Enter length" << endl;
30:     cin >> n;
31:
32:     int arr[n];
33:     cout << "Enter elements:\n";
34:     for(int i=0; i < n; i++)
35:     {
36:         cin >> arr[i];
37:     }
38:
39:     insertionsort(arr, n, 1);
40:
41:     for(int i=0; i < n; i++)
42:     {
43:         cout << arr[i] << " ";
44:     }
45:
46:     return 0;
47: }
48: }

```