

```

1  //INSERTION SORT ALGORITHM IMPLEMENTATION
2
3  #include<stdio.h>
4
5  void InsertionSort(int array[], int length)
6  {
7      int key, i;
8      for(int j = 1; j < length; j++)
9      {
10         key = array[j];
11         i = j - 1;
12         while(i >= 0 && array[i] > key)
13         {
14             array[i+1] = array[i];
15             i--;
16         }
17         array[i+1] = key;
18     }
19 }
20
21 void display(int array[], int length)
22 {
23     int i;
24     for(i = 0; i < length; i++)
25     {
26         printf("%d ", array[i]);
27     }
28 }
29
30 int main()
31 {
32     int length, i;
33     printf("##### INSERTION SORT ALGORITHM TESTING #####\n");
34     printf("\n=> Enter array size to create an array = ");
35     scanf("%d", &length);
36     int array[length];
37     printf("\n=> Enter %d array element:\n", length);
38
39     for(i = 0; i < length; i++)
40     {
41         scanf("%d", &array[i]);
42     }
43
44     printf("\n\n=> Before sort array elements are: ");
45     display(array, length);
46
47     InsertionSort(array, length);
48
49     printf("\n\n=> After sort array elements are: ");
50     display(array, length);
51     printf("\n\n");
52
53     return 0;
54 }

```