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1 // C program for insertion sort
2 #include <math.h>
3 #include <stdio.h>
4
5 /* Function to sort an array using insertion sort*/
6 void insertionSort(int arr[], int n)
7 {
8     int i, key, j;
9     for (i = 1; i < n; i++) {
10         key = arr[i];
11         j = i - 1;
12
13         /* Move elements of arr[0..i-1], that are
14            greater than key, to one position ahead
15            of their current position */
16         while (j >= 0 && arr[j] > key) {
17             arr[j + 1] = arr[j];
18             j = j - 1;
19         }
20         arr[j + 1] = key;
21     }
22 }
23
24 // A utility function to print an array of size n
25 void printArray(int arr[], int n)
26 {
27     int i;
28     for (i = 0; i < n; i++)
29         printf("%d ", arr[i]);
30     printf("\n");
31 }
32
33 /* Driver program to test insertion sort */
34 int main()
35 {
36     int arr[] = { 12, 11, 13, 5, 6 };
37     int n = sizeof(arr) / sizeof(arr[0]);
38
39     insertionSort(arr, n);
40     printArray(arr, n);
41
42     return 0;
43 }

```