Code:

//Insertion sort program

#include void insertionSort(int arr[], int n) {

int i, j, key;

for (i = 1; i < n; i++) {

key = arr[i]; j = i - 1;

// Move elements of arr[0..i-1], that are greater than key,

// to one position ahead of their current position

while (j >= 0 && arr[j] > key) {

arr[j + 1] = arr[j];

j = j - 1;

}

arr[j + 1] = key;

// Print the current state of the array

printf("Step %d: ", i);

for (int k = 0; k < n; k++) { printf("%d ", arr[k]);

}

printf("\n");

}

}

int main() {

int arr[] = {12, 11, 13, 5, 6};

int n = sizeof(arr) / sizeof(arr[0]);

printf("Original array: ");

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

printf("%d ", arr[i]);

}

printf("\n\n");

insertionSort(arr, n);

printf("\nSorted array: ");

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

{ printf("%d ", arr[i]);

}

printf("\n");

return 0;

}

/\*Output:

Original array: 12 11 13 5 6

Step 1: 11 12 13 5 6

Step 2: 11 12 13 5 6

Step 3: 5 11 12 13 6

Step 4: 5 6 11 12 13

Sorted array: 5 6 11 12 13

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