**INSERTION SORT**

**CODE:**

#include <stdio.h>

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

int i, key, j;

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;

}

}

void printArray(int arr[], int n) {

int i;

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

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

printf("\n");

}

int main() {

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

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

printf("Given array is \n");

printArray(arr, n);

insertionSort(arr, n);

printf("Sorted array is \n");

printArray(arr, n);

return 0;

}

**OUTPUT:**

