**Insertion Sorting**

#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]; *// Move larger element one position to the right*

            j = j - 1; *// Move to the previous element*

        }

*// Place key in its correct position*

        arr[j + 1] = key;

    }

}

*// Function to print the array*

void printArray(int arr[], int size)

{

    int i;

    for (i = 0; i < size; i++)

    {

        printf("%d ", arr[i]);

    }

    printf("\n");

}

int main()

{

    int n;

*// Get the number of elements in the array from the user*

    printf("Enter the number of elements: ");

    scanf("%d", &n);

    int arr[n];

*// Get the array elements from the user*

    printf("Enter the elements: \n");

    for (int i = 0; i < n; i++)

    {

        scanf("%d", &arr[i]);

    }

    printf("Unsorted array: \n");

    printArray(arr, n);

*// Perform Insertion Sort*

    insertionSort(arr, n);

    printf("Sorted array: \n");

    printArray(arr, n);

    return 0;

}

**Output**

A screenshot of a computer

Description automatically generated