#include <stdio.h>

int smallest(int arr[], int k, int n);

int selection\_sort(int arr[], int n);

int main()

{

  int arr[10], i, n;

  printf("\n Enter the number of elements in the array: ");

  scanf("%d", &n);

  printf("\n Enter the elements of the array: ");

  for (i = 0; i < n; i++)

{

    scanf("%d", &arr[i]);

  }

  printf("\n The array before sorting: \n");

  for (i = 0; i < n; i++)

    printf(" %d\t", arr[i]);

  selection\_sort(arr, n);

  printf("\n The sorted array is: \n");

  for (i = 0; i < n; i++)

    printf(" %d\t", arr[i]);

}

int smallest(int arr[], int k, int n)

{

  int small, j, pos;

  small = arr[k];

  pos = k;

  for (j = k + 1; j < n; j++) {

    if (small > arr[j]) {

      small = arr[j];

      pos = j;

    }

  }

  return pos;

}

int selection\_sort(int arr[], int n)

{

  int k, pos, temp;

  for (k = 0; k < n; k++) {

    pos = smallest(arr, k, n);

    temp = arr[k];

    arr[k] = arr[pos];

    arr[pos] = temp;

  }

  return 0;

}

