// SelectionSortAlgorithm.cpp : Defines the entry point for the console application.

//Author: Chris Orozco

//Goal: Implement SelectionSortAlgorithm using array & pointer notation

//Pre-Processor Declarations:

#include "stdafx.h"

#include <iostream>

using namespace std;

//Prototypes:

void showArray(int a[], int size);

int findPosMax(int a[], int size);

void swap(int a[], int size, int posmax);

//Main Function:

int main()

{

const int N = 8;

int a[N] = { 44, 77, 33, 55, 66, 88, 11, 22 };

showArray(a, N);

for (int i = N; i >= 1; i--)

{

int posmax = findPosMax(a, i);// N will be cycling through the values of the array Changed N -> i

cout << posmax << " " << a[posmax] << endl;

swap(a, i, posmax);//Swap the biggest with the current Changed N -> i

showArray(a, N);//check for successful swap

}

//int posmax = findPosMax(a, N);// N will be cycling through the values of the array

//cout << posmax << " " << a[posmax] << endl;

//swap(a, N, posmax);//Swap the biggest with the current

//showArray(a, N);//check for successful swap

return 0;

}

//User-Defined Functions:

void showArray(int a[], int size)

{

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

{

cout << a[i] << " ";

}

cout << endl;

}

int findPosMax(int a[], int size)

{

int posmax = 0;

int maxValue = a[0];//Consider the 1st value of the array as the max

for (int i = 1; i < size; i++)//Compares value in position 1 to position 0

{

if (a[i] > maxValue)

{

maxValue = a[i];

posmax = i;

}

}

return posmax;

}

void swap(int a[], int size, int posmax)

{

int last = size - 1;//last element of the arrray

int tmp = a[last];

a[last] = a[posmax];

a[posmax] = tmp;

}

