**SELECTION SORT**

// C program for implementation of selection sort

#include <stdio.h>

#include <iostream>

#include <stdlib.h>

using namespace std ;

void swap(int \*xp, int \*yp)

{

int temp = \*xp;

\*xp = \*yp;

\*yp = temp;

}

void selectionSort(int arr[], int n)

{

int i, j, min\_idx;

// One by one move boundary of unsorted subarray

for (i = 0; i < n-1; i++)

{

// Find the minimum element in unsorted array

min\_idx = i;

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

if (arr[j] < arr[min\_idx])

min\_idx = j;

// Swap the found minimum element with the first element

swap(&arr[min\_idx], &arr[i]);

}

}

/\* Function to print an 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;

int arr[100000];

std::cout << "enter number of elements" << '\n';

std::cin >> n;

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

{

arr[i] = rand();

}

//random entry of numbers in array

selectionSort(arr, n);

printf("Sorted array: \n");

printArray(arr, n);

return 0;

}

