Homework

Assignment 1 Write a function which swaps two integer using pointer in C language: Swap(int* x, int* y). Write a simple program to test this function.

Assignment 2
   a. Write a program to allow user input size of a 1D-array and enter the value for each elements of this array.
   b. Print the sum of this array by using pointer.
   c. Sort this array in ascending order by using the function of Assignment 1.
   d. Print the max value of sum of a subarray of this array by using pointer.

For example:
a. Users input size of an array is: 6 and enter the array as following:
-2, 11, -4, 13, -5, -2
c. sum of this array is: 11
b. Answer of max value of sum of a subarray of this array is: 20 (a subarray is from A[1] to A[3]).

Assignment 3
   a. Write a program to allow user input size of a 2D-array and enter the value for each elements of this 2D-array.
   b. Print the sum of this 2D-array by using pointer
   c. If we consider 2D-array as a matrix, please print the transpose of this matrix

The *transpose* of an *m*-by-*n* matrix **A** is the *n*-by-*m* matrix **A**$^\mathsf{T}$ (also denoted **A**$^\mathrm{tr}$ or $^\mathrm{t}$**A**) formed by turning rows into columns and vice versa:
$$(\mathbf{A}^\mathsf{T})_{i,j} = \mathbf{A}_{j,i}.$$

Assignment 4
   a. Write a program to allow user input size of a 1D-array of worker and after that, enter all information of these workers. A worker consists of 4 kind of information: id (int), full name, age (int), salary (float).
   b. Print the sum of salary paid for all workers using pointer
   c. Sort this array by salary of the worker in descending order using pointer