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INSTRUCTIONS - PRACTICAL EXAM - PRF192
- PLEASE READ BEFORE STARTING YOUR EXAM

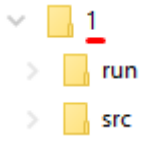
Software Requirements

- Dev C++ 5.11, Command Prompt, Notepad, WinRAR / WinZip with Windows Explorer (File Explorer) on Windows 7 and above.

Students are ONLY Allowed to use:

- His / her study materials like sample codes and program examples are stored on his / her computer only.

Instructions

- Step 1: Students download given materials from exam software.
- Step 2: Students read questions and prepare answers in the given template.
- Step 3: Prepare to submit the answer:
  - For each question (e.g., question **1**), please create two sub-folders: **run** and **src**.
  - Copy ***.exe** file into the **run** folder, ***.c** file into the **src** folder.
- Step 4: Submit a solution for each question:
  - Choose question number (e.g., **1**) in PEA software, and then attach the corresponding solution folder (e.g., **1**). Click Submit button to finish submitting this question.
  - 

Notes

- Solutions will be marked by Automated Marking Software.
- **The use of tools other than those allowed in the above section whether intentionally or unintentionally, is considered a violation of the exam rules, and the score is 0**
  - *Do not change the names of the folders , files and struct (format) of .c files specified in the exam. If you change it, the grading software can not find the execute file (.exe) or the output results to score, thus the exam result will be 0*
  - *Do not edit given statements in the **main** function. If you change, the grading software may not be able to score and the exam result will be 0.*

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<u>Question 1</u> (2 marks)

The given file Q1.c already contains statements to input data for two non-zero real variables, a and b. You should write statements to check if they have the same sign.

<u>Notes</u>:

- Do not edit given statements in the **main** function.

- You can create new function(s) if you see it is necessary.

<u>Sample input and output</u>:

Input:

a = -3.5
b = -75
Output for marking:
OUTPUT:
The two numbers have the same sign

Question 2:
(3 marks)

The given file Q2.c already contains statements to input the integer variable named n. You should write statements to calculate the **smallest positive integer n** such that the sum of 1 to n is greater than m.

$S=1+2+3+\ldots+n > m$

Notes:

- You can create new function(s) if you see it is necessary.

- Do not edit given statements in the **main** function.

Sample input and output:

Input: m=6

After processing: n = 4 because 4 is smallest positive and S=1+2+3+4=10>6 and

Output for marking:

OUTPUT:

4

Question 3:
(2 marks)

The given file Q3.c already contains statements to input data for the integer 1-D array and the integer variable named 'x'. You should write statements to print out the count of even number greater than x in the array.

Notes:

- You can create new function(s) if you see it is necessary.
- Do not edit given statements in the **main** function.

Sample input and output:

Input: n = 5

Array: 1 7 8 4 10

x=4

After processing: 2 because there are 2 even numbers greater than 4 (8 and 10)

Output for marking:

OUTPUT:

2

Question 4:

(3 marks)

The given file Q4.c already contains statements to input 2 strings s1 and s2. You should write statements to print out the count of how many times s2 appears in s1.

Notes:

- You can create new function(s) if you see it is necessary.

Sample input and output:

Input:

Enter the first string (s1): haeddhaefahfer

Enter the first string (s2): ha

Output:

2