CS 6103D Software Systems Laboratory

PROBLEM 1A Evaluation - SET A **04.10.2021**

Mark Distribution:

Maximum Marks - 5 marks
Design - 1 mark
Viva - 1 mark
Implementation - 3 marks (Part A - 1.5 + Part B - 1.5)

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1. Suppose you are given the *name*, *regno,* and *total_marks* of the students in a department. Declare a *struct Student* with fields *regno*(string), *name*(string) and *total_marks* (float). Store the student details in an array of *struct Student*.

   Design: Write pseudo code for the functions in PART A and PART B

   Part A

   Write a function *getTopper()* that takes the array and number of students as argument and returns the *regno* of students having the highest *total_marks*.

   Input format

   The input contains multiple lines. The first line contains an integer '*n*' denoting the number of students. The subsequent '*n'* lines contain the details of *n* students. Each of the '*n'* lines contains two strings, and a float value(each separated by a space).

   Output format

   The output should contain the student name with the highest mark. If there are multiple students with the same mark print the student names in separate lines.

   Sample Input

   4
   RAM B210001CS 78.0
   JIFFY B210004CS 99.5
   SHYAM B210003CS 99.5
   ASLAM B210005CS 90.0

   Output

   B210004CS
   B210003CS

Part B

Write a function *createFile()* that takes the array and number of students as arguments and creates a text file named *evaluation.txt* with each line containing the student details in the order *name*, *regno,* and their *total_marks*. Separate the fields in a line by spaces.

Input format

The input contains multiple lines. The first line contains an integer '*n*' denoting the number of students. The subsequent '*n'* lines contain the details of *n* students. Each of the '*n'* lines contains two strings, and a float value(each separated by a space).

Sample Input

4
RAM B210001CS 78.0
JIFFY B210004CS 99.5
SHYAM B210003CS 99.5
ASLAM B210005CS 90.0

Output

Text file "evaluation.txt" with following contents:
RAM B210001CS 78.0
JIFFY B210004CS 99.5
SHYAM B210003CS 99.5
ASLAM B210005CS 90.0