CS 1301 Programming Assignment#10

10/18/2016

Fares

Write a java class named MyCourse9 whose UML diagram is shown below:

|  |  |
| --- | --- |
| MyCourse9 | |
| -courseName : String  -instructorName : String  -semester: String  -year: int  -school: String  -numberOfStudents  -numberOfTests  -names: String []  -scores: int []  -grades: char[]  -lowestScoreIndex: int  -highestScoreIndex: int  -testAverage:int |  |
| +MyCourse9 (scan :Scanner)  -computeGrades ():void  -computeTestAverage ():void  -lowestStudentTotal ( ):void  -highestStudentTotal ():void  -printHeader():void  +printAll () : void  -printFooter () : void | Constructor receives the following:   1. input file   The constructor uses the number of students to create the following arrays:   1. names 2. scores 3. grades   The constructor invokes the following methods:   1. computeGrades 2. lowestStudentTotal 3. highestStudentTotal 4. printHeader 5. printAll 6. printFooter   Using the standard grading system to compute grades and stores them in the grades array.  Computes test average and stores it in testAverage  Finds the student with the lowest score and stores its index in lowestScoreIndex  Finds the student with the highest score and stores its index in highestScoreIndex  Prints report header with course name, instructor’s name, semester, year, and school name  Invokes printHeader(), Prints record numbers, names, scores, totals, grades  Prints Test average, student complete record with the lowest score  , and student complete record with the highest score |

The driver declares the name of the input file and provides the number of students in the course. The input file Also, it provides the course name, instructor’s name, number of stude4nts, semester, year, and the school name. The program reads students’ names and scores from a file named data9.txt. data9.txt contains 26 student records. Each record has student name and a score. It also should work with classes of different number of students.

Attach (do not turn in any hardcopy) via BlazeView the following items:

* 1. A single typed page with your name, class, date, and program title. The report should include what you learned from the programming assignment, problems faced, skills learned, and your observations.
  2. Name the class MyCourse9
  3. Name the driver TestMyCourse9.
  4. Zip and attach all your files (MyReport9.txt, MyOutput9.txt, TestMyCourse9.java, and MyCourse9.java).
  5. Make sure that:
     1. The program is well documented and readable.
     2. The output is well labeled and aligned

Sample input file format

CS1301

Fares

26

VSU

Fall

2016

Nicholas 20

Justyn 15

Bilal 60

Jamel 75

Brooks 82

Matthew 62

Jonathan 95

Yalanda 87

Raven 77

Zachary 65

Michael 81

Charles 97

Edward 88

Zebedee 55

Giovanni 73

April 12

Nicholas 100

Joseph 84

Giacomo 76

Robert 83

Patrick 71

Johan 45

Thomas 5

Timothy 78

Joseph 35

William 70

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Output Report \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Course Name: CS1301

Instructor's Name: Fares

Semester: Fall

Year: 2016

School: VSU

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Number Name Score Grade

1 Nicholas 20 F

2 Justyn 15 F

3 Bilal 60 D

4 Jamel 75 C

5 Brooks 82 B

6 Matthew 62 D

7 Jonathan 95 A

8 Yalanda 87 B

9 Raven 77 C

10 Zachary 65 D

11 Michael 81 B

12 Charles 97 A

13 Edward 88 B

14 Zebedee 55 F

15 Giovanni 73 C

16 April 12 F

17 Nicholas 100 A

18 Joseph 84 B

19 Giacomo 76 C

20 Robert 83 B

21 Patrick 71 C

22 Johan 45 F

23 Thomas 5 F

24 Timothy 78 C

25 Joseph 35 F

26 William 70 C

Test Average 65.04

Student with highest score

Nicholas 100 A

Student with Lowest score

Thomas 5 F