Surtej Sarin

Professor Justh

CMSC 203 – 30963

Project 2

3/25/15

External documents

**Driver Class:**

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\* The Driver constructor sets up the entire GUI in this template.

\*Provide labels and textboxes for the user to put in the student name and the answers to the 20 Driver’s License Exam

\*Implements the ActionListener to listen for the Grade button.

\*Validate grades entered. If not ‘A’, ‘B’, ‘C’ or ‘D’, display an error message using a dialog box.

\*When the Grade button is clicked, the Student name and the 20 grades are extracted from the textboxes and the report method (and only the report method) of the DriverExam class will be called.

\*Display the Student’s name with the report in a dialog box.

\*When the Read File button is clicked, the Student name and the 20 grades are read from a file and then displayed in the appropriate textboxes.

\*Use a JFileChooser to allow the user to select the file to read from. The file will contain the student name on the first line and then the second line will have 20 answers (A, B, C or D) separated by a space.

\*

\* **@author** Surtej Sarin

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**Method description, @param, @return:**

/\*\*

\* ButtonListener class method.

\* It checks if grade, readfile or exit buttons are clicked.

\*

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/\*\*

\* The main method for the program

\* **@param** args not used

\* **@throws** IOException

\*

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\*/

**DriverExam Class:**

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\* DriverExam class:

\*

\* Uses getter and setter methods to set and get both the driver name and array of test answers

\* Contains instance variables of an array of char with the correct answers to the questions and a StudentExam object.

\* Uses Method passedTest , numQuestionsCorrect ,numQuestionsIncorrect, whichQuestionsMissed and report

\*

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\*/

**Method description, @param, @return:**

/\*\*

\* Method DriverExam:

\* passes char anwsers from driver to driverTestAns

\*

\* **@param** answers

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\*/

/\*\*

\*Method passedTest:

\*returns true if the student passed the exam, or false if the student failed the exam

\*

\* **@return** true or false

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\*/

/\*\*

\* Method numQuestionsCorrect:

\* returns the total number of correctly answered questions

\*

\* **@return** numCorrect

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\*/

/\*\*

\* Method numQuestionsIncorrect:

\* returns the total number of incorrectly answered questions

\* **@return** numIncorrect

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\*/

/\*\*

\* Method whichQuestionsMissed:

\* returns an ArrayList<Integer>

\* containing the question numbers of the questions that the student missed

\*

\* **@return** missList

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\*/

/\*\*

\* Method report:

\* pass in a student name and char[] of answers, returns a String with the exam report.

\* Creates a StudentExam object.

\* Creates and returns a string with a report.

\*

\* **@param** driverName

\* **@param** driverTestAns

\* **@return** strReport

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\*/

**StudentExam Class:**

/\*\*

\* StudentExam class:

\*

\* Uses getter and setter methods to set and get both the driver name and array of test answers

\*

\*

\* **@author** Surtej Sarin

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\*/

**Method description, @param, @return:**

/\*\*

\* setStudentName method sets the students name1 to equal to name2 string

\*

\* **@param** name1

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\*/

/\*\*

\* getStudentName method returns the name2 string

\*

\* **@return** name2

\* **@author** Surtej Sarin

\*/

/\*\*

\* setStudentAns method assigns contents of array driverTestAns1 to driverTestAns2

\*

\* **@param** driverTestAns

\* **@author** Surtej Sarin

\*/

/\*\*

\* getStudentAns method returns driverTestAns2 array

\*

\* **@return** driverTestAns2

\* **@author** Surtej Sarin

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**Test Cases:**

**4 test cases with valid data (unique input data for each case)**

**2 test cases with invalid data (unique input data for each case)**

|  |  |
| --- | --- |
| **Filename** | **Grade** |
| **Student1.txt** | **John Smith PASSED**  **Correct:20 Incorrect:0**  **Questions Missed: n/a** |
| **Student2.txt** | **Betty Boop**  **PASSED**  **Correct: 16**  **Incorrect: 4**  **Questions Missed: 2 7 12 17** |
| **Student3.txt**  **Surtej Sarin** | **Surtej Sarin**  **PASSED**  **Correct: 18**  **Incorrect: 2**  **Questions Missed: n/a** |
| **Student4.txt**  **Bobby bob** | **Bobby bob**  **FAILED**  **Correct: 10**  **Incorrect: 10**  **Questions Missed: 1 2 3 4 5 6 7 8 9 10** |
| **Student5.txt**  **John Jacob**  **1 2 3 4 A B C** | **Question 1 has an invalid answer**  **Only A,B,C, or D are valid** |
| **Student6.txt**  **Burt W**  **A B C D Z Z** | **Question 5 has an invalid answer**  **Only A,B,C, or D are valid** |

**Learning Experience**

**What assumptions did you make in this project?**

We assume that the files are correct.

We assume the user will click the readfile option first. Then enter a vailed test file notepad. Then will click grade button. Will click exit button when they want to exit

**What have you learned?**

**I learned about JfileCHooser implementation as well as using array in java program.**