

Arrays Parallel Test Scores

Please note that as usual your program must comply with the commenting and formatting described in the Required Program Development Best Practices document that is posted to the eLearning system.

You will be provided with the three input files for this assignment:

- StudentNames.txt
- CorrectAnswers.txt
- StudentAnswers.txt.

For all three of these files, your program does not have to check for validity of the data or check for errors.

Your program is to grade a final exam which consists of ten (10) multiple choice questions.

Each multiple-choice question has one of four possible answers: A, B, C, D.

The file StudentNames.txt contains the student names of all the students that took the exam. Each student name exists on a separate line. The names are represented as first name, a space and then the last name. You must count how many student names are represented in the StudentNames.txt file. Your program, therefore, needs to be able to detect how many student names are in the StudentAnswers.txt file.

At the program start, the program uses a function to read in all the names in from the StudentNames.txt file into an array.

The file CorrectAnswers.txt contains the correct answer for all the questions, with each correct answer existing on a separate line. This file contains, in effect, the answer key for the exam, one correct answer per line. There are ten answers in this file. The answers are represented by capital letters that are an A, B, C, D letter.

At the program start, the program uses a function to read in all the correct answers from the CorrectAnswers.txt file into an array.

The file StudentAnswers.txt contains the student answers for all the questions, with each student answer existing on a separate line. The StudentAnswers.txt file contains all the responses the students entered on the exam, again, one answer per line. Each set of ten lines in this file represents the responses for one student.

At the program start, the program uses a function to read in all the student responses from the StudentAnswers.txt file into an array.

Your program should read in all the data in all three files into respective arrays.

The program should then close the three files and continue all its processing using the filled arrays.

The program examines the student responses with the answer key for each of the ten questions. The program will determine whether the answer was correct by comparing it against the proper entry in the answer key array for each question.

Look at the output listed at the end to determine what information must be processed and displayed for the report.

The program may need to convert numbers to strings.

If you use an int as an argument, `to_string()` will return the string equivalent.

```
string to_string (<int>);
```

The program may need to convert chars to strings.

If you use a char as an argument, `string()` will return the string equivalent.

```
string(1, <char>)
```

These functions should help in creating a report string. Your program will use a function to create a report string for each student.

For the assignment, you will be provided a main.cpp that has the main() program code provided. This main.cpp also contains the function stubs with documented preambles required to complete the program. Your code development efforts will be to develop the code required for the function bodies.

The provided code in main.cpp cannot be modified.

The assignment also includes the three input files that produced the sample output.

The program must have all the reports be displayed to the screen and written to an output file named ExamAnalysis.txt

For the assignment submittal zip up the main.cpp, the StudentNames.txt, CorrectAnswers.txt and StudentAnswers.txt files.

To submit the assignment, the zip folder containing the 3 files should be submitted to the blackboard assignment.

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Your output should look like the following for the provided files:

Student Number : 1
Student Name : Deepika Padukone
Amount Correct : 10
Percent Score : 100
Incorrect Answers : None
Student passed.

Student Number : 2
Student Name : Ayano Omoto
Amount Correct : 3
Percent Score : 30
Incorrect Answers : 2 (A/B) 3 (A/C) 4 (A/D) 6 (A/B) 7 (A/C) 8 (A/D) 10 (A/B)
Student not passed.

Student Number : 3
Student Name : Yuka Kashino
Amount Correct : 3
Percent Score : 30
Incorrect Answers : 1 (B/A) 3 (B/C) 4 (B/D) 5 (B/A) 7 (B/C) 8 (B/D) 9 (B/A)
Student not passed.

Student Number : 4
Student Name : Ayaka Nishiwaki
Amount Correct : 3
Percent Score : 30
Incorrect Answers : 1 (B/A) 3 (B/C) 4 (B/D) 5 (B/A) 7 (B/C) 8 (B/D) 9 (B/A)
Student not passed.

Student Number : 5
Student Name : Marshal Bruce Matthers III
Amount Correct : 2
Percent Score : 20
Incorrect Answers : 1 (C/A) 2 (C/B) 4 (C/D) 5 (C/A) 6 (C/B) 8 (C/D) 9 (C/A) 10 (C/B)
Student not passed.

Student Number : 6
Student Name : Aishwarya Rai
Amount Correct : 2
Percent Score : 20
Incorrect Answers : 1 (D/A) 2 (D/B) 3 (D/C) 5 (D/A) 6 (D/B) 7 (D/C) 9 (D/A) 10 (D/B)
Student not passed.

Student Number : 7
Student Name : Aubrey Graham
Amount Correct : 7
Percent Score : 70
Incorrect Answers : 1 (B/A) 5 (C/A) 8 (A/D)
Student passed.