

Assignment 1

Submit Assignment

Due Sep 23 by 11:59pm **Points** 10

Submitting a text entry box, a website url, or a file upload

Write a Java program that can maintain grades for a simple course.

Functional requirements

Your program will be command driven. That is, you will write a control loop that repeatedly prints a prompt, reads a command, the executes the command. Grade information will be stored in a text file name grades.txt, located in the same directory as the executable. The course is assumed to have exams and assignments, each worth 50% of the grade. Both assignments and exams should graded out of 100 points. Within a category, all entries are weighted equally. All updates should be saved to the file after each command.

q

Quit the program.

addS <name>

Add a new student. If a student of that name already exists an error message is displayed and no changes are made.

addA

Add a new assignment. Assignments are not named, they are indexed starting at 1.

addE

Add a new exam. Exams are not named, they are indexed starting at 1.

grade <name>

If name is invalid, print an error message and do nothing.

For each assignment, display the student's grade and prompt for a new grade. If no grade has been entered a 0 is displayed for the current grade. If the user enters no data the current grade is kept. If an invalid grade is given (outside of 0-100, or non-numeric), the program reprompts.

Then repeat the process for exams.

gradeA <number>

For each student prompt for that student's grade on the given assignment. If number is invalid, print an error message and do nothing.

gradeE <number>

For each student prompt for that student's grade on the given exam. If number is invalid, print an error message and do nothing.

display

Print a table of all entered grades, with the overall grade displayed in the right-most column. A row of this table would be <student name>, E₁, E₂, ..., E_m, |, A₁, A₂, ..., A_n. No input is gathered by this command it simply displays the gradebook. Note that exams and assignments are separated by the | character.

Any other (invalid) command should cause an error message to print ("no such command") but have no effect.

File format

The gradebook file should have the number of exams followed by the number of assignments on the first line, and the rest of the file should contain the exact same data. For example:

```
2, 1
John Doe, 83, 78, |, 91
Amy Adams, 99, 66, |, 88
```

Rubric

	123
non-functional requirements (file i/o)	112
functional requirements (command behavior)	135
efficiency/style	123

See [Assignment Rubric](#) from Documents

