Lab 3

Programming to C
CSCI 112, Fall 2022

Objectives

- Work with arrays
- Use input files

Description:

This comes from problem 1, chapter 7 on page 445-446.
You are to write a program that will grade an n-question test and provide the grade for each test-taker and provide how many students missed each question.

The input file will have as its first line the number of questions and a character for each answer. The following lines will have the id of the student and their answers for each of the n questions (as a character for each).
This is your input file in file /public/lab3/exam.txt:
7 ccddabc
100 bcddabc
107 ccddcba
112 ccddabc
115 bbccabc
120 cdcdabc

Your program will print the right answers, the score for each student (by id) and the number of students who missed each question. All of these prints need to be in a pleasing format.

Need to know:

- You can assume no more than 10 answers for the exam.

Requirements:

- Best practice: create a directory called lab3 to work in
- Run your program, reading the input from /public/lab3/exam.txt (do not use redirection)

- DO NOT USE GLOBALS.
- MUST COMPILE WITH -Wall
- Cannot use strings
- You must submit:
    - 1) Screen shot showing your successful compile and the output
    - 2) source code

My Output

```
[k57h721@csci112 lab3]$ gcc -o lab3 -Wall lab3.c
[k57h721@csci112 lab3]$ ./lab3
Question        1 2 3 4 5 6 7
Answer          c c d d a b c
ID      Grade(%)
100     85.71
107     71.43
112     100.00
115     42.86
120     71.43
Question        1 2 3 4 5 6 7
Missed By       2 2 2 1 1 0 1
```

Submission

- Due Date: Sunday, 9/25 at 11pm

  Each student will complete and submit this assignment individually. I will check for plagiarism. The late policy for assignments can be found in the syllabus.

Grading

Points (100 pts)

- 10 points – style: used comments and indented your code so it is readable
- 10 points – submitted screenshot as required above
- 25 points – compiles successfully with no warnings and you compiled with -Wall
- 5 points – opened and read in file /public/lab3/exam.txt as input
- 5 points – prints the output in a pleasing manner and shows all the information
- 5 points – reads in the input correctly
- 5 points – computes each student's grade correctly
- 5 points – prints the number of students who missed a question correctly

- 5 points – uses arrays to store the right answers and the missed number of answers
- 5 points – did not use string functions to break the read in answers apart and did not read in the correct answers as one string – read them in one at a time as a %c
- 10 points – uses at least 2 functions plus main
- You will get a 0 on this assignment if
    - you do not submit the source code
    - OR you use global variables