

## CSCD 240

### Lab 3

Write a program that reads in Lab scores, Homework scores, Quiz scores and Exam scores and then produces a weighted average. The weighted average will be based on what percent each of the stated categories. When the percentages of each category are added, they total 100%. All scores will be given on a 0 to 100 point basis.

Presume the following about each category:

#### Homeworks

- 30% of the course grade

#### Labs

- 20% of the course grade

#### Quizzes

- 11% of the course grade

#### Exams

- 39% of the course grade

#### Sample input (parenthesis denote the type):

Stu Steiner

89 95 85 75 85 90 95 55 90 (Labs)

90 85 88 100 30 (Homework)

99 100 98 76 80 85 (Quizzes)

56 85 95 (Exams)

- You may presume all points for labs, homework, quizzes and exams will be positive.
- You must ensure the totals for each category is greater than 0.
- The name may contain spaces.
- MAX is set to 100 – You must use this in your code
- TOTAL is set to 10 – You must use this in your code
- You must ensure all values are in range meaning the user can't enter a number for the type that is less than 0 or greater than TOTAL. You must ensure the scores are between 0 and 100 inclusive.
- Once the array has been filled, report the percentage earned in each category followed by the weighted percentage – after 2 decimal points the value will be rounded up.
- Report the Grade Point for the course based on the following formula:

$$4.2 - ((100 - \text{Avg. Percentile Score}) / 12)$$

No grade is ever rounded up

## **Modified Sample Run removed all the user input prompts**

Student Name: Stu Steiner

89 95 85 75 85 90 95 55 90 (These were the entered values displayed this way for space)

Lab Average – 84.3%

90 85 88 100 30 (These were the entered values displayed this way for space)

Homework Average – 78.6%

99 100 98 76 80 85 (These were the entered values displayed this way for space)

Quiz Average – 89.7%

56 85 95 (These were the entered values displayed this way for space)

Exam Average - 78.7%

Your weighted percentage is: XX.X%

Your final grade is: Y.Y

## **Specifics**

- cscd240Lab3.c will contains my main() you may not change main but you will add your code in the functions at the bottom of the file
- You must use static arrays
- You must use stdin – All scores will be entered on the keyboard
- All input scores will be integer values

## **To Turn In**

A zip file containing the folder Lab3 and:

- all files necessary to compile and grade your code
- An output capture named cscd240lab3out.txt
- My Makefile

Your zip will be named your last name first letter of your first name lab3.zip (Example: steinerslab3.zip)