

## Homework 1

Files to submit: **grade\_need.c**

Time it took Matthew to complete: 5 minutes

- All programs must compile without warnings when using the -Wall and -Werror options
- Submit only the files requested
  - Do **NOT** submit folders or compressed files such as .zip, .rar, .tar, .targz, etc
- Your program must match the output exactly to receive credit.
  - Make sure that all prompts and output match mine exactly.
  - Easiest way to do this is to copy and paste them
- All input will be valid unless stated otherwise
- The examples provided in the prompts do not represent all possible input you can receive.
- All inputs in the examples in the prompt are underlined
  - You don't have to make anything underlined it is just there to help you differentiate between what you are supposed to print and what is being given to your program
- If you have questions please post them on Piazza

As an instructor I am frequently asked at the end of the quarter what is the minimum grade I need to get on my final to get an X in the class. So in order to help me answer this question a little early you are going to write a program that calculates just that.

Your program should ask for the following input in this order

1. The letter grade you want to get in the class
2. What percent you need to get in the class to get that grade (a value from 0 – 100)
3. What percent you currently have in the class (a value from 0 – 100)
4. The weight of the final (a value from 0 – 100)

Your program should then output the minimum grade you need to get on the final to achieve the desired score.

Examples

1. Enter the grade you want in the class: B  
Enter the percent in the class you need in the class to get that grade: 80  
Enter your current percent in the class: 75  
Enter the weight of the final: 20  
You need to get at least 100.00% on the final to get a B in the class.
2. Enter the grade you want in the class: A  
Enter the percent in the class you need in the class to get that grade: 90  
Enter your current percent in the class: 83  
Enter the weight of the final: 30  
You need to get at least 106.33% on the final to get a A in the class.
3. Enter the grade you want in the class: B  
Enter the percent in the class you need in the class to get that grade: 85

Enter your current percent in the class: 72

Enter the weight of the final: 50

You need to get at least 98.00% on the final to get a B in the class.