

Homework 2

Files to submit: **grade_need.c**

Time it took Matthew to Complete: **15 mins**

- 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
- Print all real numbers to two decimal places unless otherwise stated
- 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

Restrictions

- No global variables are allowed
- Your main function may only declare variables and call other functions.

Assumptions

- Input is not guaranteed to be valid

You will be writing a program that calculates the minimum percent needed on a final to get the desired grade in the class. For this problem assume

Grade	Minimum Percent Needed
A	90.00%
B	80.00%
C	70.00%
D	60.00%
F	0.00%

- Your program should accept both lower case and upper case letters for the grades
- You can no longer assume that the user's input will be valid
 - Some wrong things the user can do wrong include but aren't limited to
 - Improperly formatting the input
 - Choosing a grade that doesn't exist
 - If the user does something like this, your program should report the error and terminate

Examples on the next page.

Examples

1. Enter the grade you want in the class: B
Enter your current percent in the class: 75
Enter the weight of the final: 20
You need a grade of at least 100.00% on the final to get a B in the class.
2. Enter the grade you want in the class: b
Enter your current percent in the class: 75
Enter the weight of the final: 25
You need a grade of at least 95.00% on the final to get a b in the class.
3. Enter the grade you want in the class: A
Enter your current percent in the class: 85
Enter the weight of the final: 20
You cannot get a A in the class because you would need to score at least 110.00% on the final.
4. Enter the grade you want in the class: F
Enter your current percent in the class: 90
Enter the weight of the final: 10
You cannot score low enough on the final to get a F in the class.
5. Enter the grade you want in the class: H
Unknown Grade Received: H. Ending program.
6. Enter the grade you want in the class: C
Enter your current percent in the class: bob
Invalid formatting. Ending program.
7. Enter the grade you want in the class: A
Enter your current percent in the class: 87
Enter the weight of the final: !75
Invalid formatting. Ending program.
8. Enter the grade you want in the class: B
Enter your current percent in the class: 12G
Invalid formatting. Ending program.
9. Enter the grade you want in the class: B
Enter your current percent in the class: -35
The number you last entered should have been positive. Ending program.