Homework Assignment 12 This assignment due on Thursday April 27.

Write a program to compute the GPA of 4 courses.

Requirements:

1. You must follow the coding style of the department. (The examples during the lecture and the examples in the textbook may not follow the coding style, but the template does.)
2. You should create two arrays in the main function, one array holding the credit hours of each of the 4 courses, and another array holding the grade of each of the 4 courses. You should use a constant integer to define the size of both arrays.
3. You should have a function ***get\_data***(). This function should ask the user to enter the credit hours and the grades of the 4 courses. To make a friendly interface, your function should ask the user to type the credit hours of the first course, then the grade of the first course, then the credit hours of the second course, then the grade of the second course, and so on, until the grade of the fourth course.
4. You do not need to consider the situation if the user enters zero or negative numbers. However, if you handle the problem properly and make sure the user enters positive numbers for the credit hours and non-negative numbers for the grades, you will receive 10% bonus.
5. You should have a function ***compute\_GPA***(). This function should take those two arrays as the parameters and compute the GPA. Then the function should return the GPA. Your function may take more parameters if necessary.
6. You should have a function ***display\_GPA***(). This function should take the GPA as the parameter and display the message “Your GPA is X.XX” on the command prompt. The GPA must be displayed in the standard format. i.e. There should be exactly 2 digits on the right side of the decimal point. For example, “Your GPA is 3.50”.
7. The ***main*** function should call the above three functions.
8. The template has been provided.
9. The output of your program should be like this. (You may also test your program using the data I provided here.)

Please enter the credit hours and the grade of Course #1:

1 4

Please enter the credit hours and the grade of Course #2:

3 3.75

Please enter the credit hours and the grade of Course #3:

1.5 2.5

Please enter the credit hours and the grade of Course #4:

2.5 3.5

Your GPA is 3.47

Hint:

1. The equation to compute the GPA is

GPA = (CreditHour1 \* Grade1 + CreditHour2 \* Grade2 + CreditHour3 \* Grade3 + CreditHour4 \* Grade4) / (CreditHour1 + CreditHour2 + CreditHour3 + CreditHour4)

1. If you forget how to format your output, you should review section 3.7.