UNIVERSITY OF CALIFORNIA, RIVERSIDE

Department of Computer Science and Engineering
CS61 – Machine Organization and Assembly Language
Lab Assignment 5
Given August 27, Due 3:00 pm August 29, 2001

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Problem:

Write a LC-2 assembly language program to help a student to calculate his/her GPA for the last quarter (Spring, 2001).

Detail:

He/she took 4 courses last quarter. The name and credits for each course are:

Course Name	CS001	CS002	EE001	PE001
Credit	3	4	4	1

The score for each course is not based on letter (like: A, B, C, D), but based on the number. The score for a course is between 0 and 100. For different score you get a different GPA for that course, based on the following table:

Range of the score	GPA
≥90	4.0
≥80 and ≤89	3.0
≥70 and ≤79	2.0
≥60 and ≤69	1.0

Use the keyboard to enter the student name and the scores for each course, and then calculate the credit-weighted average GPA for the student, based on the following formula:

$$\text{Average GPA} = \frac{\sum_{\text{number of Courses}} \text{GPA} \times \text{Credit}}{\text{Total Credits}}$$

For example, if the score for these four courses are 78, 82, 93, 65.

$$\text{Averge GPA} = (2.0 \times 3 + 3.0 \times 4 + 4.0 \times 4 + 1.0 \times 1) \div 12 = 2.9$$

Output the result on your screen and make sure the precision of your result should be one digit behind the decimal point.

Format for Input and output:

The input and output on your screen should follow the format like this:

```
Please input the name of the student:
XXXXXX XXXXXX
Please input the score for each course: (0-100)
CS001:  XX
CS002:  XX
EE001:  XX
PE001:  XX
The average GPA of student XXXXXX XXXXXX is X.X
```

Note: XX… stands for the input from your keyboard or the output from your program.

Requirement for report:

1. Please PRINT out both your code and the result. (Use keyboard "ALT+PrintScreen" to copy your console window, and paste to your word document.)

2. Please add some comment in your program to explain your code.