

LAB 9 – Modular Design

You will need the following for this lab.

$$\text{GPA} = (\text{course1_grade} * \text{course1_credits} + \dots + \text{coursen_grade} * \text{coursen_credits}) / \text{total_credits}$$

For example, $(4 * 3) + (3 * 2) + (4 * 3) + (4 * 2) = 38 / 10 = 3.8$ GPA

Task 1

Write and test a function that reads in a series a values from the user until the user enters -1. The function should return values entered in a list.

Task 2

Write and test a function that computes a GPA for a list of letter grades and a matching list of number of credits. Thus, the first item in the grades list may be 'B', and the first item in the number of credits list 4, the number of credits for the course received a 'B' in.

Task 3

Write and test a function that converts a letter grade to a corresponding value, e.g. 'A' returns a 4, 'B', returns 3, ... , 'F' returns 0.

Task 4

Write a complete program using the functions developed above that prompts the user for a grade for a given course, and the number of credits the course is worth. It continues to prompt for another grade until the user enters -1. It then displays the GPA for the entered set of courses.

EXTRA CREDIT (1 pt.)

Modify the program to work for entered grades of A, A-, B+, B, B-, etc.

What to Turn In

- Copies posted in BlackBoard of your completed program from task 4.