

ENGG\*1410: “Introductory Programming for Engineers”,  
Assignment #8  
Structures in C

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**Start Date: Week #8, Due Date: Week #9 (Friday, 5:00 PM) in Dropbox**

1. Create a student structure that contains three items

- Student\_Name
- Student\_ID
- Student\_Age

Assign a value to each item and display the values of struct members.

2. Write a program that prompts the user for two distances (feet and inches).

- The user should enter the 1st distance in feet, and the 1st distance in inches separately
- The user then should enter the 2nd distance in feet, and the 2nd distance in inches separately
- The program will then add the feet and add the inches
- The program will then change to feet if inch is greater than 12
- Finally, the program will display the sum of distances in feet and inches

Hint: Declare a struct (call it Distance) with two elements (feet and inch).

3. Write a function *elapsed\_time* that takes as its arguments two time structures and returns a time structure that represents the elapsed time (in hours, minutes, and seconds) between the two times.

So the call

*elapsed\_time (time1, time2)*

where *time1* represent 3:45:15 and *time2* represents 9:44:03, should return a time structure that represents 5 hours, 58 minutes, and 48 seconds. Be careful with times that cross midnight.