CENG114 Homework 1

In this homework, you are expected to develop a student grading system. Using this system, users must be able to:

1. Set homework, midterm and final percentages for three different courses (the same percentages are applied to all courses),
2. Enter grades for multiple students, calculate and view their grades (number of students is not limited; they can be entered until the user chooses otherwise),
3. View average grade for all courses after entering grades of the the last student.

You may define the variables for storing percentages as global variables but all other variables must be defined as local variables within functions. In addition, your program must at least have the following functions:

- **void setPercentages():** Set homework, midterm and final percentages by calling the following three set functions
- **float setHomeworkPercentage():** Read homework percentage from the user and return it
- **float setMidtermPercentage():** Read midterm exam percentage from the user and return it
- **float setFinalPercentage():** Read final exam percentage from the user and return it
- **int getTotalGrade(int, int, int):** Calculate weighted grade using percentages and grades and return it
- **char getLetterGrade(int):** Return letter grade according to the grade received as a parameter. Grade ranges for each letter is presented below:

Grade	**Letter**
90 - 100	A
75 - 89	B
60 - 74	C
45 - 59	D
0 - 44	F

You are expected to deliver a well implemented C program that must be able to be compiled and run without producing any errors or warnings. Explain your functions and code segments using comment lines. Avoid using functions such as `printf_s` or `scanf_s`; use standard C library functions instead of them. Your program is expected to run similar (but not strictly the same) to the sample run presented in the next page. Study it carefully. User inputs are underlined.

Sample Run

```
Welcome to course grading system!
Please set homework, midterm and final percentages first.
Please enter homework percentage: 25
Please enter midterm percentage: 35
Please enter final percentage: 40
Done.

(Student1) Enter homework, midterm and final grades for first course: 90 75 60
(Student1) Enter homework, midterm and final grades for second course: 60 65 40
(Student1) Enter homework, midterm and final grades for third course: 80 90 75
(Student1) Grade for first course is: C (72)
(Student1) Grade for second course is: D (53)
(Student1) Grade for third course is: B (81)

Do you want to enter an another student? (y/n): y

(Student2) Enter homework, midterm and final grades for first course: 20 25 10
(Student2) Enter homework, midterm and final grades for second course: 0 5 5
(Student2) Enter homework, midterm and final grades for third course: 40 50 55
(Student2) Grade for first course is: F (17)
(Student2) Grade for second course is: F (3)
(Student2) Grade for third course is: D (49)

Do you want to enter an another student? (y/n): y

.
.
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Do you want to enter an another student? (y/n): n

First course average: 46.000000
Second course average: 24.333334
Third course average: 69.666664
Bye!
```