**UCF-COP 3223-unit2.hw**

The goal of this HW is to write a C program that prints the final letter grade after the user is asked to enter the average scores for HW, Project, Lab, Midterm1, Midterm2 and the Final Exam. Use the following grading rubric:

All the average scores are to be declared as float variables.

* Online HWs : 20%
* Online Projects : 20%
* In Person Labs : 5%
* Online Exams (Lockdown Browser with WebCam) (two midterms and a final): 55%

|  |  |
| --- | --- |
| **Letter** | **Range (%)** |
| A | 94 – 100 |
| A- | 90 – 93 |
| B+ | 87 – 89 |
| B | 84 – 86 |
| B- | 80 – 83 |
| C+ | 77 – 79 |
| C | 74 – 76 |
| C- | 70 – 73 |
| D+ | 67 – 69 |
| D | 64 – 66 |
| D- | 61 – 63 |
| F | 0 - 60 |

Pay close attention to the sample runs below. The user is allowed up to three times to enter a valid score. All scores are real numbers that are between 0 and 100.

When the program prints the final letter grade, the user (see sample runs below) is asked to start over by entering either y or Y. An entry that is different from y,Y,n and N is cosidered invalid. The user will be allowed to try up to 3 times to enter either y,Y,n or N.

**Once again, work in groups!**

**Your .c file should be something like:**

**//unit2.hw**

**//Group members: John Jones, Jenna Johnson, James Junaid**

**/\* ALL GROUP MEMBERS MUST SUBMIT THE SAME .c file \*/**

**//include directives go here…**

**int main() {**

**//Your code goes here.**

**Return 0;**

**}**

**Sample Run 1:**

Enter the hw average score: 75.5

Enter the project average score: 566.5

Invalid score. Try again: 63.2

Enter lab average score: 100

Enter midterm1, midterm2 and the final: 78 900 63

Invalid midterm2. Try again: 90

Here are all your average scores:

HW : 75.50

PROJECTS : 63.20

LABS : 100.00

MIDTERM1 : 78.00

MIDTERM2 : 90.00

FINAL : 63.00

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OVERALL AVERAGE : 75.09

(75.50\*.2 + 63.20\*.2 + 100.00\*.05 + (78.00+90.00+63.00)\*.55/3 is 75.09)

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FINAL LETTER GRADE: C

Would you like to start over (Y/N): t

Invalid character. Try again: 9

Invalid character. Try again: y

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Enter the hw average score: 80

Enter the project average score: 50

Enter lab average score: 100

Enter midterm1, midterm2 and the final: 80 408 100

Invalid midterm2. Try again: 48

Here are all your average scores:

HW : 80.00

PROJECTS : 50.00

LABS : 100.00

MIDTERM1 : 80.00

MIDTERM2 : 48.00

FINAL : 100.00

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OVERALL AVERAGE : 72.80

(80.00\*.2 + 50.00\*.2 + 100.00\*.05 + (80.00+48.00+100.00)\*.55/3 is 72.80)

FINAL LETTER GRADE: C-

Would you like to start over (Y/N): t

Invalid character. Try again: 9

Invalid character. Try again: N

Good-bye!

**Sample Run 2:**

Enter the hw average score: 75.5

Enter the project average score: 566.5

Invalid score. Try again: 989.3

Invalid score. Try again: 0

Enter lab average score: 323

Invalid score. Try again: 232.3

Invalid score. Try again: 5221

I’m sorry…You tried too many time.

Would you like to start over (Y/N): t

Invalid character. Try again: 9

Invalid character. Try again: 3

Program terminated!

**Sample Run 3:**

Enter the hw average score: 75.5

Enter the project average score: 566.5

Invalid score. Try again: 63.2

Enter lab average score: 100

Enter midterm1, midterm2 and the final: -78 900 630

Invalid midterm1. Try again: 78

Invalid midterm2. Try again: 90

Invalid Final. Try again: 63

Here are all your average scores:

HW : 75.50

PROJECTS : 63.20

LABS : 100.00

MIDTERM1 : 78.00

MIDTERM2 : 90.00

FINAL : 63.00

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OVERALL AVERAGE : 75.09

(75.50\*.2 + 63.20\*.2 + 100.00\*.05 + (78.00+90.00+63.00)\*.55/3 is 75.09)

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FINAL LETTER GRADE: C

Would you like to start over (Y/N): n

Good-bye!