

Project

MCIS 5103: Advanced Programming Concepts

Instructor: Dr. Justin L. Rice

Due Date: 4/24/2017

Create a Final Grade Calculator. **(100 points)**

Requirements:

- I. The system shall ingest student_grades_input.txt (see next page). This comma delimited input text file contains the names and grades of 30 students. Each student has grades for six assignments: 3 Homework Assignments, 1 Midterm, 1 Project, and 1 Final.
- II. The system shall compute the final numerical grade for each student using the following:
$$\text{final_numerical_grade} = 0.45 * [(\text{HW1} + \text{HW2} + \text{HW3}) / 3] + 0.25 * \text{Project} + 0.30 * [(\text{Midterm} + \text{Final}) / 2]$$
- III. The system shall use the following to determine the final letter grade:

Final Numerical Grade	Final Letter Grade
90 - 100	A
80 - 89	B
70 - 79	C
60 - 69	D
0 - 59	F
- IV. The system shall use a GUI to display the final letter grade for each student. Note, a scroll bar may be needed to fit all the names and grades within the GUI. Please be sure to include screenshots that detail the entire output. More than one screenshot may be required.
- V. At the bottom of the GUI, include the total number of A's, B's, C's, D's, and F's.

Instructions:

Develop a report that **describes the system architecture, provides an overview of the source code, and addresses each of the five requirements (above)**. Note, **all responses should be contained in ONE WORD or PDF document. Other formats will not be accepted.**

Do your best! This assignment is worth 25% of your final grade!

student_grades_input.txt

Name,HW1,HW2,HW3,Midterm,Project,Final

Stephen Curry,100,100,95,100,85,98

Michael Jordan,100,100,100,100,90,90

Kobe Bryant,95,90,98,91,87,92

Kevin Durant,92,98,94,94,88,94

Russell Westbrook,90,90,93,90,80,93

Lebron James,98,100,97,98,89,91

Klay Thompson,90,89,94,91,88,95

Chris Paul,94,85,100,94,85,94

Reggie Miller,100,94,95,96,94,91

Tim Duncan,90,91,97,98,89,91

Tony Parker,97,95,96,92,88,94

Steve Nash,100,80,90,94,96,96

Karl Malone,89,70,86,96,85,80

Scottie Pippen,88,75,70,90,94,96

Allen Iverson,85,80,69,91,75,86

Tim Hardaway,100,0,75,65,95,89

Kevin Garnett,89,56,91,88,79,73

Kyrie Irving,75,64,89,70,90,82

Vince Carter,91,89,76,64,0,70

Tracy McGrady,88,76,54,61,91,79

Larry Bird,0,86,100,96,84,88

Magic Johnson,87,80,70,66,77,91

Chris Mullin,99,87,94,0,86,84

John Stockton,89,91,96,88,85,80

David Robinson,65,56,88,46,77,90

Charles Barkley,78,60,89,79,35,0

Derrick Rose,94,78,90,86,80,88

Dwayne Wade,90,56,86,70,62,30

Carmelo Anthony,60,0,50,84,46,92

Ray Allen,97,64,95,75,88,89