

COP2500 Laboratory 10

Introduction: The goal of this assignment is to create a grade book, populate it, and determine the final score and grade for each student. Specifically, create an associative three dimension (3D) array with student name (index), grade category, and score. This is similar to the model we went over in lecture a couple of weeks ago.

Procedures:

PART 1: Populate the array.

For the first dimension, populate the student names with ("Doe", "Jones", "Smith", and "Torres").

For the second dimension, populate the grade categories with ("research paper", pop quizzes", "midterms", and "final").

For the third dimension, while generating random numbers between 50 and 100, enter one research paper score, 10 pop quizzes scores, two midterm scores, and one final score for each student.

PART 2: Display the contents of your populated array. For each student, output their score(s) by grade categories. For example:

Student name Jones:

- (1) Research paper = 61
- (2) Pop quizzes = 85, 72, 80, 55, 68, 98, 71, 78, 89, 93
- (3) Midterms = 62, 81
- (4) Final = 83

PART 3: Calculate the final score based on the following:

- Research paper is 20% of the final grade.
- Pop quizzes are 10% of the final grade.
- Midterms are 35% of the final grade.
- Final is 35% of the final grade.

Calculate the final grade based on the following final scores:

- A = 90 or higher
- B = 80- 89
- C = 70 – 79
- D = 60 – 69
- F = less than 60

For each student output the final score and the final grade. When completed, upload your code to the drop box as **cop2500lab10**.