



VBA Assignment 3 (30 points)
IM442 Spring 2020

For a bowling class, Professor Pin wants to be able to track his bowling students' improvement over the course of the semester. Grades in this bowling class are assigned based on the improvement of average score of each individual bowler.

Scores for each bowler are taken 5 times each semester (for a total of 4 games each time) and improvements are measured by comparing the first set's average to the final set. Data is taken at each of the following times: Day 1 of class, Day 20 of class, Day 40 of class, Day 60 of class and the last day of class.

Each student is responsible for entering his/her own scores into the form provided for each day that the data needs to be collected. Paper score cards are also collected by Professor Pin in case a discrepancy occurs.

Scores for each 4-game set are then recorded on a worksheet and averages displayed below the four scores. Professor Pin has 15 students in his class with no plans to add or lose students. All students are to be tracked in the same worksheet.

Additionally, Professor Pin wants a button to calculate the final grade for him once all scores have been entered. The button should also check to make sure all students have entered the data before calculating.

Grade breakdown is as follows:

- A – 30% or more improvement
- B – 25% - 29.99% improvement
- C – 20% to 24.99% improvement
- D – 15% to 19.99% improvement
- F – Below 15% improvement

Final letter grades should be displayed next to student names on a separate sheet beginning in cell A2. Professor Pin would be delighted if the names displayed in alphabetical order, but it is not necessary given the size of the class.

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Assignment Requirements: Work individually, in pairs or in groups of 3.

Please provide a flowchart of the planning stages of your coding assignment. Additionally, please provide test data used and outcome resulting from test data (both valid and not). Please provide this in PRINTED format with all team members names on assignment.

Complete a workbook that addresses all of Professor Pin's needs for his bowling class.

All work must be completed using VBA and not calculated on the front end of excel. Formatting may be completed on the front end of excel.

Student scores must be collected via a user form, not directly input onto a worksheet. **In reality, Professor Pin would not give students access to the actual worksheet, but you do not have to ensure this level of protection for this assignment.

Your assignment is due prior to the beginning of class on Monday March 9.