

C490 Homework #1

Points:	: 40 points
Due Date:	: July 11 th (8:30am)
Submissions:	: Canvas and hardcopy

PART I (20 POINTS)

- Write a Java program to print out the first n ($n > 2$) Fibonacci numbers. Your program should ask the user to input the value of n . The first two Fibonacci numbers could be defined as constants.

PART II (20 POINTS)

Writing a grading program for a class with the following grading policies:

- a. There are three quizzes, each graded on the basis of 10 points.
- b. There is one midterm exam, graded on the basis of 100 points.
- c. There is one final exam, graded on the basis of 100 points.

The final exam counts 40 percent of the grade. The midterm counts for 35 percent of the grade. The three quizzes together count for a total of 25 percent of the grade. (Do not forget to convert the quiz scores to percentage before they are averaged in.)

The final letter grade will be decided as the following:

- A---[90-100]
- B---[80 - 90)
- C---[70 - 80)
- D---[60 - 70)
- F---[0 - 60)

The program should read in the student's scores and output the student's grade record, which consists of three quiz scores and two exam scores as well as the student's overall numeric score for the entire course and final letter grade.

Define and use a class for the student record. The class should have instance variables for the quizzes, midterm, final, overall numeric score for the course, and final letter grade. The overall numeric score is a number in the range of 0 to 100, which represents the weighted average of the student's work. The class should have methods to compute the overall numeric grade and the final letter grade. These last methods should be void methods that set the appropriate instance variables. Your class should have a reasonable set of **accessor** and **mutator** methods, an **equals** method, and a **toString** method, whether or not your program uses them. You may add other methods if you wish.

An incomplete implementation is provided (StudentRecord.java), you just need to finish the program. A **binary** version of complete program (StudentRecord.class) have also been uploaded. You can run the binary version to see how your program is expected to behave.

A companion test program (StudentRecordDemo.java) is also provided.

WHAT TO SUBMIT:

- Submit your code for both Part I and II to Canvas (using the “Assignments” function).
- Submit a hard copy of your code and test-run output (or screenshot).
- Make sure that you follow the “Assignment_style-guideline_C490” or you will lose credits.