

Please submit your annotated R code in a file titled `hw01.R` and the file `mygrade.csv` described below.

1. The file `samplegrades.csv` contains simulated course grade data for a large section of introductory statistics.

The format of the file is Comma Separated Values (CSV), which is the text-based format for Excel spreadsheets. R has a specific function for reading in such files. Download the file, put it in your working directory, and then execute the command

```
grade.data <- read.csv("samplegrades.csv", header=TRUE)
```

This will create a data frame named `grade.data`. Use this to answer the following questions about students in this course.

- (a) Determine the percentage of students who had a course average of less than 60%, the minimum to pass the course.
 - (b) How many students did not take the final exam?
 - (c) Which was higher, the average for quizzes, the midterm, or the final?
 - (d) How many students had a midterm score of at least 80% and also a quiz score of no more than 70%?
 - (e) Find the percentage of students in the entire class that had a course average lower than their final exam score.
 - (f) Repeat the previous part, but this time for students in the top 20% of the class, and then for students in the bottom 20% of the class.
 - (g) Find the number of students who either had a quiz average between 70% and 80% or had homework average between 90% and 95%.
2. Give the R code required to add a new column to `grade.data` that contains a letter grade, assigned based on the table below.

Course Average x	$90 \leq x \leq 100$	$80 \leq x < 90$	$70 \leq x < 80$	$60 \leq x < 70$	$x < 60$
Letter Grade	A	B	C	D	F

3. Export `grade.data` (with course grades) to a CSV file `mygrade.csv`.