Exercise 9 - Pulling all of the R programming pieces together

Complete the tasks below and submit your results via a pull request on GitHub by the beginning of tutorial next Friday.

To begin this week, fork the TA's Exercise 9 Github repo. Clone the forked repo so that you have the required files. Be sure to commit regularly to demonstrate incremental progress on your work.

Write a function that takes a directory name as an argument called `dir` plus any other arguments requried to accomplish the specified task.

The function should read data from each file in the specified directory and calculate the coefficient of variation (standard deviation divided by the mean) for a user specified column. These values should be returned as a vector.

To calculate a reliable coefficient of variation we would like to have 50 observations, but we also don't want to force the user to use our high standard for the data. Make your function, by default, report an error if any file has less than 50 observations, but allow the user to override this behavior and only receive a warningif 50 observations are not present in a file.

Also consider what the function should do if a file doesn't have the correct number of columns or the provided data includes `NA`'s.

Turning in your assignment via GitHub

Once you have committed all changes to your local Git repo and pushed all of those commits to the forked repo on GitHub, you can "turn in" your assignment using a `pull request`. This can be done from the GitHub repo website. When viewing the forked repo, select "Pull requests" in the upper middle of the screen, then click the green "New pull request" button in the upper right. You'll then see a screen with a history of commits for you and your collaborator, select the green "Create pull request button". In the text box next to your user icon near the top of the page, remove whatever text is there and add "owner's last name submission", but obviously substitute your last name. Then click the green "Create pull request" button.