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GEOS597 Homework #1: GIT, Markdown and MATLAB

Due: 9/02/2016

Part 1

Make a Github account using your @u.boisestate.edu email address. Then, using the Github Desktop app, clone the master branch of the GEOS397 project to your local directory. Make a new branch called GEOS397 Lastname, where you insert your last name.

Github account made with email address: jbshuler@gmail.com. Could not create branch; Github prevented me from pushing changes to repository. I attempted on school machines as well as my own computer.

Part 2

In your new branch, make an new file in the HW1 directory called HW1 Lastname.md. Use Markdown to write a summary of how you would go about ensuring that (if the clas had 10 students) you would partner with every other student for the 9 homework sets (you can write some equations if you want). Keep in mind that a constraint imposed on this problem is that no two students in the class can have repeat partners.

To ensure that a single student is paired with each of nine other students for nine assignments, simply number students 1 through 10. If the student in question is #1, then his/her partner for each week will be as follows:

Homework Assignment # - Student # of Partner For That Week: 1-2, 2-3, 3-4... 9-10

Determining how to ensure that ALL ten students for ALL nine assignments have a unique partner proved more than I could handle. And I tried. A lot. I arranged ten uniquely numbered students in a circle, used grids, etc. and nothing worked.

Parts 3 and 4

In the same file, list all of the possible variable types in MATLAB that are covered in the MATLAB style guide reading assignment. Also, give a description of each type and list why this is a useful type of variable. Based on the reading MatlabStyle1p5.pdf, give an example variable name for each of the variable types you identified in Part 3. Then compile (i.e.) save your Markdown file as an html file; also commit your changes to your specific GIT branch; DO NOT publish though.

1. General Variables

With the notable exception of structures, variable names should be mixed case.

e.g. wayPoints or unprocessedData

2. Variables representing the number of objects:

These should contain the prefix n unless specifying number of rows, in which case the name should contain m . These are helpful for clearly denoting that the variable has a discrete value.

e.g. nComputers or mRows

3. Plural variable

The best practice is to make all variables singular and to use the suffix Array to denote plurals

e.g. pit and pitArray

4. Variables representing a single entity number:

These variables should contain the suffix No. They can also contain i to indicate that the variable is an iterator. These help further denote the nature of a variable.

e.g. partNo or iSample

5. Boolean Variables:

Boolean variables are used to denote a statement as True or False. They should never be negative. These can be used to determine values above or below a threshold.

e.g. isOver or isNegative

6. Variables representing named constants:

These variables are helpful for recalling single values repeatedly. They should be in all caps, with underscores between words.

e.g. PLANCKS_CONSTANT or AIR_TEMPERATURE

7. Structures and Functions

Structures can be used to more efficiently organize data. Their names should begin with a capital letter. Functions are pieces of code that can be called to accept inputs and produce outputs. Their names should be all lower case.

e.g. Streamflow or computeevaporation

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