CSC509 Project 5

In this project, you're not making an app! This is probably the only such project you will make. Instead, you're going to practice with Git/GitHub and with arrays by solving problems and posting them to GitHub.

Part 1: Git started

To begin, create a new Git repository somewhere on your computer. You should have a descriptive name for the folder this lies in, including your name, the fact that this is project 5, and the class (csc509). I want you to have the following files in this Git repository:

- **Readme:** A file called `README.md`, which is a text file written in a formatting language called Markdown. This file will serve as the front view into your repository up on GitHub, and should be well-organized and written in an approachable voice. You should use the basics of Markdown (see link above) to format the file nicely. It should explain the purpose of the repository: why does it exist? How is it organized? What are its contents? Why should someone bother to look at it?
- **Problem Solutions:** Xcode playgrounds containing solutions for various array problems coming from the list "Good List/Array Questions" on Canvas. The number that should be present will vary based on the difficulty of the problems chosen. I would say at least 5 array problems solved, though if you are starting with some easier ones (like Array-1 questions on CodingBat) I would expect to see more.
    - You should likely aim for one playground per problem solved, though you can group problems that are similar into one (like "problems from Array-2 on CodingBat") if you'd prefer.
    - Use Markdown comments (they begin with `//:` instead of the usual `//`) to add some helpful place-setting commentary at the top of your code, including the prompt, perhaps paraphrased for brevity. Yes, you can use fancy Markdown formatting in these comments! Include a link to the full problem statement online, using proper Markdown link formatting (see Markdown guide above!). Also include your name.

You should primarily treat this as an opportunity to learn about arrays and for-loops. Learning requires starting from whatever you are able to solve and completing increasingly difficult problems. I think you're probably in a good place when a problem like "performing memoization" on Problem 14 of Project Euler, as I described it on Canvas, is not scary to you.

Make sure you're using the tools of computer science to your advantage! Write functions to reduce repetition if that makes sense, define variables with helpful (long!) names, format your code properly, and *test your code!*

Part 2: GitHub

You should now have a repository with some useful code that you'd like to host on GitHub. Post your repository up on GitHub and make sure the `README.md` file looks good! Here is an example of a nicely formatted readme. Yours doesn't need to be this fancy, but take it as a source of inspiration! I'll be grading from this online repository, so make sure it stays up-to-date with any changes you make.

Part 3: In Partnership

For this final section of the project, I want you to simulate working working with a group/partnership. You should pick someone else in the class, add each other as contributors to your GitHub repositories, and make at least one change to their project. This change should be (a) helpful, and (b) documented on your own README.md file ("`I helped out Jim on [his repository](https://...) by…`"). It's okay if it is a small, non-code change, such as helping to format one of their files.

Submission

Submit just the URL to the GitHub repository. I can grade from only that—thus, make sure the repository online is exactly how you want it!