CSCI 3308 Software Development Methods and Tools Fall 2017
Instructor: Alan Paradise
Homework 2 – Material by Grace Muzny

Due Date: 5:00 pm on Monday, October 16th

Objectives

- Learn more about software development collaboration tools and techniques (version control, code review).
- Reflect on your experiences using agile software development.
- Actively observe design decisions at work on the web.
- Use self-awareness to anticipate how you would like code review interactions to work in the future.

Assignment

For this assignment, if the question asks for a short response, please respond in 1 – 3 concise sentences. Your full write-up should be no longer than 2.5 pages.

Part 1 - Version Control (10 points)

1. You have edited the file my_program.py locally but you have not yet committed the changes. You realize that you are doing the wrong thing and would like to forget the changes that you have made. What command do you use to acquire a clean version of my_program.py that corresponds to the most recent committed changes?

2. You have edited my_program.py and committed your changes to your local repo. After a conversation with the rest of your team, you realize that the feature that you implemented must be completely re-written. What command should you use to revert to the commit before this most recent one?

3. What are 2 reasons that developers might use feature branches rather than developing on the master branch in a distributed version control system?

4. (4 points) You have learned how to use the command git push to move your changes from your local repository to the remote repository (e.g. git push origin master). Now read about pull requests (https://help.github.com/articles/about-pull-requests/), which are a common strategy for teams to merge new code into their code bases. What is different between a pull request and using git push? What is the same? How is a pull request different from the command git pull ?

Part 2 - Software Development Methodologies (6 points)

1. Reflect on your experiences in the agile planning lab. What are some challenges that you think a team following an agile software development methodology might face that a team using a waterfall methodology wouldn't face?

2. Why are some stories more difficult to estimate than others?

3. What should you do if there is major disagreement about the point estimate of a story?

Part 3 - Web App Design (3 points)

1. (3 points) Choose a website that you frequently use (e.g. Facebook, Amazon, The Denver Post, eBay, something that you visit at least once a week). What are 2 design decisions that this website made that you appreciate? What are 2 things that you think that they could do better? Do you think that this website is easily accessible for users that have disabilities (why or why not)? Answer in 3 - 6 sentences.

Part 4 - Peer Code Review (6 points)

1. Lab number seven will focus on peer code review. Conducting code reviews is an industry-standard practice in which changes to the code base are reviewed by peers and supervisors. Why would a company or team want to follow this practice? How might code reviews affect the code base overall?

2. Think about the situation in which you have submitted a feature for code review. What kind of comments would you like to receive? What kind of testing would you ideally like your reviewers to conduct? What kind of testing do you think that reviewers do in real-world situations? How would you want to react to constructive criticism?

3. Think about the situation in which you are reviewing a team-members code. What are some things that you might look out for in particular? What are two ways that your attitude as a reviewer could affect team dynamics?

Submission

You should submit a pdf on moodle containing your answers. Be sure to list your information at the top of the file. Its name should be <Lastname>_hw2.pdf.