CSCI 3308 Software Development Methods and Tools, Fall 2017

Lab 7—Code review

After all teams in your recitation section have presented their 5-minute summary of their project, then proceed with this exercise in Peer Code Review.

Objectives

Practice the activity of conducting a peer code review.

Part 1 - Review code snippet

1. Download the folder of code snippets from Moodle for this lab.
2. Each of the files is written to accomplish the same task.
3. The files are python programs that monitor a directory of JSON files and print to the console when JSON files are added, removed, or modified.
4. For this portion we are interested in the first three snippets. Each pair/team: **Please log the issues you find in a plain text file!**

   Note: These snippets have few comments which serve as hints to you. For example, there might be a comment - *something is missing here?* or *is there a bug here?* Please look at such comments as hints provided to aid your code review.

5. Review snippet1.py and record issues or problems you identify
6. Review snippet2.py and record issues or problems you identify
7. Review snippet3.py and record issues or problems you identify
8. Make sure to save the log text file so that your TA can view it.

Part 2 - Peer code review

A large number of defects are usually concentrated in a small amount of code. Good candidates for selection:

- Code that implements a tricky algorithm
- Use of a difficult interface
- Code that employs a new programming technique
- Code that implements an aspect of the project that is particularly high risk

Exercise for Part 2

1. Find a partner that is *not* in your project group and print with line numbers the code they have brought to the lab.

2. Spend individual time reading and, if possible, executing the code.

- Does the code do what its author intended it to?
- Look for opportunities to improve quality:
  - Accuracy
  - Maintainability
  - Reliability
  - Robustness
  - Security
  - Scalability
  - Reusability
  - Efficiency
- All reviewers mark up the hard copy

3. You should attempt to **locate at least three** problem areas. When found, you should note the line number in your log and express the reason for a possible lack of quality.

4. If you are struggling with interpreting the code, you should have the author explain it to you and see if it makes sense. If you cannot understand code quickly, it could be a good sign that the code was not written in a very readable way.
5. Discuss with the author in person ways to make code more readable and efficient. Note these lines and the solutions discussed.

Credit

To get credit for this lab exercise, show the TA your your notes on the solution discussion.