Task 5

Project 1 have helped to understand and gain hands on experience on software development tools, configuration management tool such as GitHub and GitHub Desktop and software documentation tools.

I have developed couple of academics projects and completed programming assignments from the scratch. In those assignments, we have been given requirements or were asked to write requirements and we were free to choose technologies. It involved designing the project, coding and performing Black Box testing. In this project, we had to reengineer the Fire Danger System implemented in Fortan77 into Java. It involved understanding the system, studying the code and analyze the flowchart. Understanding the basic syntax of Fortan77 was the very important to analyze the code. For example, if statement format is different, it is an ‘arithmetic if’ format. It has three conditions depending upon whether the result of if statement is negative, zero or positive. Analyzing and working on code written by other person is really a challenging task. Thanks to the comments and flowchart, it was manageable. I learnt why good documentation and code comments are important.

Through this assignment, I acquired the skill of writing maintainable code. Only writing comments does not make the code maintainable. We need to follow the programming style guidance. For example, constant variables should be written in upper case and private class should have underscore suffix. By following coding standard, increases readability of the code and easy for others to review the code. It helps to resolve the bugs quickly.

Though I have studied that documenting code is very important, I have never documented the code except for few comments. In this assignment, I studied how to document the code using JavaDoc. JavaDoc is an industrial standard for documenting Java classes. Utilize JAutoDoc to generate the JavaDocs automatically. It has a well-defined structure in which first paragraph describes the method documented. Following the description, there are descriptive tags such as @param: the parameters of the method, @return: what the method returns such as int, double and @throws: any exceptions the method may throw. Due to HTML format of JavaDoc, we can access the documentation over the web.

Completing Git course on CodeAcademy was very informative and provided good guidance on how to use GitHub. GitHub enable us to store our code online and helps in version control. I gained practical experience on how to create repository, to branch the repository and merge the changes made in child branch in master branch. By opening the pull request, we are able to view the differences or changes in two branches. This enables to review the changes made and merge the changes only if they are correct. GitHub creates the history of commits i.e. saved changes to the repository. So we can keep track of when and what changes are made to the projects.