

Min Ji Kim

## Lab 1 – Short Essay

*Short Essay.* The software development process described in section 2.16 is known as the Waterfall Model. Investigate what “Agile Development” is about and compare it to the Waterfall Model. **Create a PDF file to submit.**

The Waterfall Model takes on a linear approach to software development, where developers only move on to the next stage when the previous stage is completed. The Waterfall Model consist of seven stages (Requirements specification, system analysis, system design, implementation, testing, deployment, and maintenance). At any stage, developers can go back to a previous stage to fix errors. Some of the strengths of this approach is that it requires scrupulous records to be kept, and users will know what to expect out of this. However, some of the weaknesses are that this method relies on heavy initial requirements. Without proper and heavy initial requirements, the project can be faulty and thus have to start all over from the beginning. Product is only tested at the end, meaning if there was a bug earlier on, it may affect everything.

Agile Development was actually an approach that strengthened the weaknesses of the Waterfall Model. Instead of following a linear approach, agile development follows an incremental approach. In agile development, developers start with a simple project and work on small modules. Modules are done weekly or monthly, and each module is evaluated and tests are run. Agile development allows changes to be made even after initial planning is done and program can be rewritten as users demands change. As agile development allows changes, it also makes it easier to add features. Lastly because modules are tested periodically, bugs can be caught and taken care of, and will not be left until the end.

Overall, the Waterfall Model is a more traditionally approach and should be used when developers and users know exactly what they want their final product to be. Both methods has its strengths and weaknesses, but agile development also tends to be a strength to the waterfall model's disadvantages.