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Agile Development and Waterfall Development

The development process described in chapter 2.16, also known as the waterfall development process, is a multi-step process in which one stage must be completed before progressing to the next stage. First, the requirement specification process identifies what the software system will address and what the software is required to accomplish. During the next step, system analysts identify the system's input and output to determine how the output can be produced. The problem is then broken down during the system design step to implement the solution in an easier and more manageable way. Next, the software is coded during the implementation step and after is tested to find bugs in the program. After the software is thoroughly tested, it is deployed to the clients and maintenance is performed to improve the software in the future and add updates to the software. This method of software development is executed by only performing one step at a time.

Another form of software development is the Agile method. Unlike the waterfall method, the Agile method has multiple incremental development cycles that are focused around producing a part of the product that only includes certain features. For each increment, the development team decides which features will be implemented into the current build. The team also meets frequently to report progress on the current build of the software system and can determine what actions need to occur to finish the increment by the expected date. After one increment is completed, the team reevaluates the project and decides what should be included in the next build. The main difference between Agile development and waterfall development is the repetition of the development cycle. In waterfall

development, each stage is only done once and it is difficult to return to a previous stage in the project.

In Agile development, the next build of the software system goes through the same development process until the project is completed. Since the planning occurs while development takes place, the project can adapt to different market conditions in Agile development while all the planning is accomplished at one time for waterfall development. For large development teams, the Agile development style can be difficult to implement efficiently compared to the clear steps of the waterfall development method.

Agile development would be better suited for a developer because the incremental cycle allows a developer to focus on only a small number of features at one time. In addition, Agile development cycles can readjust planning as the project continues, informing the programming team what to change during development rather than waiting until the testing phase. Incremental builds also allow testing every build, making it easier for testers to find bugs in the code. Both development styles are unique and each specific software may use a different development process that best suits the program or the developers.

Work Cited

1. "Agile Methodology Understanding Agile Methodology." Agile Methodology RSS. N.p., 23 Oct. 2008. Web. 24 Jan. 2017. <<http://agilemethodology.org/>>.
2. Liang, Y. Daniel. "Chapter 2 : Elementary Programming." Introduction to JAVA Programming: Comprehensive Version. 10th ed. Upper Saddle River, NJ: Pearson/Prentice Hall, 2015. 33-74. Print.