Marist College

Object Oriented Programming in Java

Assignement_0

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Water-Fall model and Agile Development

According to "Water-fall" model, we have various stages that help to complete the life cycle of Water fall model.

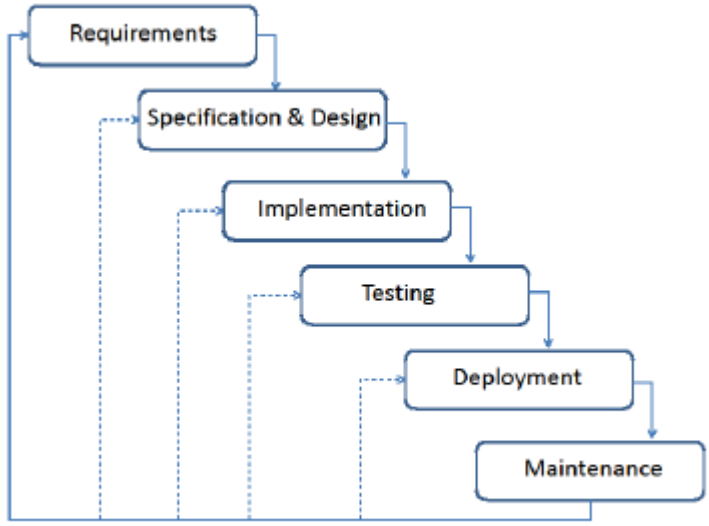

Fig: Water-Fall Model; Image Source: researchgate.net

The image above depicts the Life Cycle of a water fall model. In general, the life stages of this model are Requirement Gathering, System analysis and Design, implementation, testing, deployment and maintenance.

Requirement Gathering: In this stage the requirements area gathered from the client regarding functionality they want the software to process. Further they will address and document in elaborated way that the system needs to perform. Developers at this stage have brainstorming sessions with the customers to know what they want from their software and what the software will able to do.

System Analysis and Design: This stage can be segregated into further two sub stages and those are System Analysis and the other is Design. In System Analysis the developers analyze how the actual data flow should be and in order of that they take in note the Inputs as well as the output of the system. In general, software developers firstly identify the outputs and then they seek the inputs required in order to generate the demanded output.

Further, in this stage the developers make use of data abstraction. This is done at many levels. They perform in such a way that the problem statement is broke

down into multiple small problem statements, the purpose is to handle each problem statement strategically and to provide solution corresponding to those.

Implementation: Now at this stage the multiple problem statements created at System Analysis stage is designed into program. Thereafter, each program is integrated to form a single working software program. These programming are generally done in software languages such as Java, C, C++, C# etc.

Testing: The testing of the software is done to maintain a bug or issue free environment. In general software companies have a separate team of Quality Assurance and testing. These people are not part of System analysis and design stage.

Deployment: The software is made available for the customers to use. Depending upon the requirements they may be installed in different vicinities.

Maintenance: At this stage a software product is generally maintained in order to match the ever growing software environment and those are done by software upgrades, patches and fixes.

This is a continuous process after which the company again arranges meetings for next set of iterations, and this a continuous process.

Whereas, in **Agile development** the stages are *Requirements, Development, Testing, Delivery and Feedback as described in "Guru99.com".* In this kind of software lifecycle the overall software development process faces a number of changes in the requirements as a result in development and testing. This process gives a greater chance for the customer to interact with the developers, managers and testing teams. Further, the quality of a Software is maintained more in this kind of models and the whole process is based on incremental progress.

References:

Guru99.com. (2019). [online] Available at: https://www.guru99.com/waterfall-vs-agile.html [Accessed 7 Sep. 2019].

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