Agile and Waterfall testing in software development

This report will show a contrast between waterfall model and the agile model of software development. Software development has certain aims which must be achieved in a certain deadline. There are plenty of various approaches for reaching these software development goals. Waterfall and Agile are two of most well-liked software development models.

**Waterfall in software development**

Waterfall model is a chronological order model and is split into different phases in software development for developing software. For instance; in a waterfall, the water progressively flows downward through the software implementation phases. Every phase is implemented and needs to be finished before the following one begins and there is no overlapping of the phases. (Hasan et al. 2019)

There are generally seven phases to develop the software. “Gather and document requirements, Design, Code and Unit test, perform system testing, perform user acceptance testing (UAT), fix any issues and deliver the finished product.” These are listed in order of phases of the Waterfall model in software development. (Arunan et al. 2016)

Software development businesses have been implementing this model for their use and spend an extensive of time in each phase of making while all the needs are encountered. The businesses which adopt and use this model consider that significant time is consumed in initial design effort and corrects bugs in advance. Once the design phase is done, it's applied precisely in the coding phase, with no changes after. Often the analysis, design and coding teams are detached and work on small quantities in the whole method. (Singh, 2012)

**Waterfall model advantages and disadvantages**

The advantages of a Waterfall model are used greatest for those projects where aims are simple and well comprehended, additionally as the phases are well defined. In addition, they are implemented straightforwardly.  End users are also well known about projects. Although the disadvantages of Waterfall model are that it is not flexible, additionally it does not have feedback ability to repair mistakes. Moreover, the phase needs to be completed to go to the next phase. This is telling that the bugs cannot be spotted until and unless all the phases are completed. (Chandra, 2015)

**Agile in software development**

One of the models used in software development is the Agile model and it is one of the latest models to be introduced in the software development industry.

Agile is a repetitive model and is used in a co-operating method for development. The reason of the Agile model is to focus the quick distribution of a request in whole functional mechanisms. In Agile models, the length of the developments is divided or “time-boxed” into phases called “sprints” compared to creating errands and plans. As stated, it has a defined length (usually in weeks) with a management list of deliverables, strategic at the beginning of the sprint. (Arunan et al. 2016)

The Agile model is emphasised and stands for 'agility' and 'adaptability' in software development. Agile models contain numerous repetitive development agendas that try to advance the quality of output with every repetition. Each repetition goes throughout the all the requirements of the design, coding and testing. (Singh, 2012)

**Agile model advantages and disadvantages**

The most vital of the advantages of agile model is the skill to reply to the altering requests of the development. There is no supposition amid the progress side and the client, as there is one to one contact and non-stop inputs from the customer. The primarily focus of development is more on the user because of additional & recurrent communication by the client. (Balaji et al. 2012)

The disadvantages of Agile is if the schemes are less, by consuming the Agile model is surely cost-effective. However, if it is a big scheme, then it turns out to be difficult to judge the works. In addition, the time essential for the project in the software development. As well as. only older developers are in an enhanced spot to take the results required for the agile type of development. To an extent, which is left barely any spots for fresh programmers, till it is shared with the senior resources. (Balaji et al. 2012)

In conclusion, if requirement changes frequently and smaller projects, deliver product in short period time with skilled resources then use “Agile model”. Although If requirement is clear, larger project then we choose “Waterfall model” (Balaji et al. 2012)

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