ISMAIL HOSSAIN
ID: 19-41088-2
Section: C

Combination of Agile and V-model to remove the limitation in Software Engineering

Statement of Purpose:

In the new age of era of software engineering is firmly infatuated toward the software development. It is going to be essential for every work. I took this topic to do the research because software engineering is my good option to research. I am from this background major. I tried to take an interesting topic like this. If I combine the Agile and V-model it will be better enough.

The efficiency and effectiveness of software development. For the dynamic environment organizations are frequently changing their software system to meet their objectives. The proposed research is a new approach by integrating the traditional V model and agile methodology to combining the strength of these models while minimizing their individual weakness. Agile methodology has its own benefits but there are deficiencies in several of the features of traditional software development methodologies that are essential for success. That's why this combination will be the right combination for the software industry rather than a pure agile approach.

In the V-model and the Agile method has some limitation. In the V-model there is no description about feature. There is a limitation and then another is the Agile method. There is no idea about the development process. If we combine it then it will be more benefitted for all. Anyone can easily develop software with this kind of method. This is the reason why actually I am motivated with this thing.

So, the interest towards this specific topic was driven by my side to solve a real life problem to develop a new method where I have faced a personal life problem. The main aim of the research is to make a new method and solve the limitation of the problem. This research can change the way of life Software development life cycle. Everyone can benefitted.

Research Proposal

Introduction:

Today the IT arrangements include huge speculations and basic information of the association concerned. During advancement also support such enduring programming, prerequisites are broken down, planned and code modules are created, trying is arranged, and code is tried commonly. In this way, programming advancement and support administrations ought to guarantee client fulfillment. The agile model proposes an incremental and iterative approach to software development. The agile model helps the software developer carry out user necessities and obtain user satisfaction. It tells to a software development process depending on the iterative development. The development process, time, whole iteration process is generally fixed before in this method [1]. The

verification and validation model is ordinarily known as the "V Model". It is viewed as an expansion of the waterfall model. It is a comprehensive, organized strategy where the various stages progress successive or straight [2]. That implies that each stage starts solely after the culmination of the last stage, in our proposed model where the features of agile and v-model will combine. That model will give the accessibility to change in the middle of the development run and a specific plan.

In customary software development models, it works in an adaptive approach. Agile is an adaptive method, and it gives more importance to future work like coding and customer need during development, and there is no specific planning. It is clear about its features and can change according to customer needs. On the other hand, there is another approach called predictive approach. The v- model is a part of it, where its tasks are explicitly planned, and the development team sets the goal at the starting time. This paper proposes a new model where agile and V model will combine, which allows the software development team to design a specific task more preciously and also will give the power of changing according to customer need.

Both the agile and V model have their advantages and disadvantages. The proposed model, which combines both agile and v-models, has some limitations on its own. Which combination of both agile and V models. The proposed model has some limitations of its own.

1. The proposed algorithm still does not have any real-life application.
2. It may not work for a complex project.
3. This proposed model needs more theoretical and practical investigation.

Literature Review:

Agile method is called ‘the quality of being agile and it is readiness for motion and nimbleness, activity, dexterity in motion, this is actually growing up volatile Internet software industry. The agile tells us substantial amount of literature and debating then following articles in Cutter IT journal. Though, academic research on the subject till now is scarce, as most of existing publications are written by practitioners or consultants. This is the case when software development is incremental, cooperative, straight forward and adaptive.

Agile software development methods have evoked a substantial amount of literature and debates. Many of the companies and organizations have already used and practiced that are claimed to make their way of performing
and delivering software more agile. This software actually makes sense out about jungle of emerged agile software development methods. The result has been chosen due to the comparative analysis. We have followed that method without rationalization, covering certain phases of the life cycle.

The software development industry has been adopting agile method instead of traditional software development method because they were not so much comfortable without this one. This method adopted was a systematic literature review on studies published from 2002 to 2014. After that most of the methods are tailoring approaches research papers proposed or improved a technique and their finding and research criteria using evaluation. Method engineering was the base for tailoring, then the method is independent of agile method then the main criteria used in internal and objectives variables.

Agile methods are used world widely and then successful in many development situations and then it has been attracted of whole software community. It has attracted both

researchers and actioners. Here, it is most of the famous process is agile method. Tailoring the standard process which is immediately needed of the developers. We draw on both theoretical and empirical learning to formulate seven heuristics for maintenance efforts uncritically focusing on benefits and actioners wishing to go agile. However, those benefits may not occur automatically and some optimization. Will normally be necessary different work and local practice differences.

Software maintaining is the most expensive process of software development life cycle. The maximum cost will be related to maintenance of the software. So that there is need to require find a solution to decrease the cost. Actually, waterfall was used for a longest period of time and then it was used by various kind of organizations. The small products are released after very iteration it follows how to help the customers by taking update of software. As per analysis, authors observed this improvement needed to make up for lack of training. There is needed in the private sector and also automation creation.

This proposed V-Model motivates the students' creativity to solve the proposed challenge, for the competitive complex project but its needed experience through real problem. Thus, pilot test is one of the proposed methodologies which can be enhanced by the implementation of the framework. Nevertheless, here most of the methodologies are mainly focused on theoretical concepts, without improving disciplinary and transversal competences which basically use development processes. Here is fuzzy logic controllers design process through an experimental product.

Software is prevalent in many products manufactured today and this car washing machines, mobile phones, satellites and then many other industrial devices. Even though many companies are in a transition towards delivering services deployed on already delivered hardware and mechanics, they still heavily rely on the financial transaction taking place when the physical product goes from the company to the customer.
For more than a decade, agile methods have been popular and have become widely software engineering field.

An agile Safety plan ensures a good development project and it decreases the amount of cost and reduces time. It also ensures the safety process is complete. And then product sufficient information will be developed by manufacturer.

This study aims to investigate the consequences of the combination of agile and v-model in software engineering.

This will encompass the following sub objectives:
Based on the research questions mentioned above, the following objectives have been set for the present research:

1. Find out the applications of agile and v-model.
2. Find out the research methodologies in this area.
3. Find out the domain of this area.

To successfully conduct systematic research, we need to find the most important and common questions that have been asked during the research, the questions that we need to answer after the research. So far, we've managed to find out five questions that have been presented below:

1. Which facts of agile and V model are used in software development process?
2. What research methods have been used in the proposal area?
3. What is the domain that has been analyzed for evolutions?

Proposed Research Methodology:

In this research, software engineering, using a model where features like specific plans and ability of change in the middle run of development are still not available. Such agile gives the feature of change, but there is no specific plan to develop software. The v-model gives the opportunity of a specific plan to develop software but not the ability to change. In the paper, a new software development model will have the feature of both agile and v-model. This model can change in the development process with a specific plan. This paper analyzes the advantages and disadvantages of agile and v-model. It proposes a new model with a new feature. The development stage of both agile and v-model is deeply analyzed. After analyzing the new development process for the new model is proposed. In our proposed model, the features of agile and v-model are combined and give more facility in software development industries. Here a more specific plan and the ability to change the module in the middle is given to both customers and developers.

1. For the first research question, the agile model can react rapidly as indicated by client need and decide to change bearing the circumstance interest. In IT or programming, where work is developed, the agile model can fit flawlessly. Agile is a wide umbrella of programming advancement convictions which calculate structure for computer programming that starts with a beginning arranging stage and follows the street toward the arrangement stage with iterative and steady connections for the duration of the life-pattern of the task.

2. For the second research question, In the requirement proposal part, the need of the proposal is properly discussed about the proposal. After the proposal , a specific plan to develop the software will be introduced. Then comes the development face where coders will develop the software.

3. For the third research question, In the requirement analysis stage, the customer's requirement is written down. At the same time, the acceptance test is performed. In the system design, the hardware design is performed, and at the same time, system testing is developed. System design is broken into small parts in the architecture design phase, and integration testing is developed in the same time. In module design, more specific design of system design at same time unit test is developed. Lastly, in the coding part, programmers do code for the system.

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