

Before Agile Methodology In Testing

Before the scrum methodology launched, most organizations are following the waterfall model for developing the software. In the waterfall model, the organization is working more on the documents before the coding phase.

The documentation starts with the business analyst (BA) by writing the business requirement documents or business requirement specification (BRS documents), where the business analysis mentions all the requirements needed in the application by the client. These BRS documents contain all the details like strategy, functional specifications, and also user interface design.

What's the business analysis to gather all the client's requirements from the client, then the technologist takes the document and prepares the phone technical requirement document. This technical requirement document contains architecture of the application, object-oriented, functional design, data structures, user interface design, and also non-functional requirements.

After preparing all these documents and also baseline those documents, then the coding process is started. After developing is the module, the developers are integrated into those models. Before deploying that application to the production environment, the QA was testing the application and validated it. So in this way, the development process of a software product that's a couple of years.

In this process, the software is developing by using the Waterfall model. If you want to read more about the Waterfall model, you can go through this link because there we have described the Waterfall model in detail.

In the [Waterfall model](#), the client or business have to wait for a long time to get a working product. If they have found any issues in the application, they have to wait for a longer time to fix that. Because of this reason, various organizations are looking for an alternative methodology that can adapt the changes as soon as possible and no need to wait for the final product for a longer time.

Agile Methodology Definition

Agile methodology is a type of project management process, mainly used for software development, where demands and solutions evolve through the collaborative effort of self-organizing and cross-functional teams and their customers.

Overview in Agile Methodology Scrum

When the organization follows the traditional development model like the Waterfall model, V model, iterative model, spiral model, etc., these all models are based on a timeline approach

that means the development happens sequentially. The product is not revealed until the software product is fully developed and validated by the [QA](#).

Until the final product is delivered, sometimes the objectives are also changed, which directed to the loss of money and waste of effort. That's why the software community brought a new development model, which is an Agile methodology model in the year of 2001. The software community peoples are coming together and also define what should be practiced, and also they have created one is Agile manifesto.

What is Agile manifesto?

Is administration nothing but of the values and principles which is Expressed in the agile methodology. Agile methodology has four fundamental values and 12 key principles. The main aim of this and principles is to help cover better software development methods by providing a clear and measurable structure, which promotes iterative development team collaboration and recognition of the changes.

here are the four fundamental values of the agile manifesto:

- Individuals and interactions over processes and tools
- Working software over comprehensive documentation
- Customer collaboration over contract negotiation
- Responding to change over following a plan

and below are the 12 principles of the agile manifesto:

- Customer satisfaction through early and continuous software delivery
- Accommodate changing requirements throughout the development process
- Frequent delivery of working software
- Collaboration between the business stakeholders and developers throughout the project
- Support, trust, and motivate the people involved
- Enable face-to-face interactions
- Working software is the primary measure of progress.
- Agile processes to support a consistent development pace
- Attention to technical detail and design enhances agility.
- Simplicity
- Self-organizing teams encourage great architectures, requirements, and designs
- Regular reflections on how to become more effective

Within the Agile project management, various Frameworks are also used to develop or deliver a software product or service. Each Framework has its setup characteristics and terminology, but all of the frameworks are said some common principles and practices.

Out of various agile frameworks, there are two most popular frameworks widely used by multiple organizations. That is scrum and kanban.

Agile Scrum Methodology

Scrum is one of the Agile Framework, which is used for software development. This Framework was created by Jeff Sutherland and Ken Schwaber (who were also part of the 17 individuals who cemented the Agile Manifesto).

this Framework mainly focuses on five values, Which are:

- Commitment
- Courage
- Focus
- Openness
- Respect

The goal of scrum is to develop, Deliver, and complex product collaboration ability and iterative progress. Also, you may what distinguishes scrum from other agile methodologies? The answer to this is scrum has the roles, events, and artifacts. Here is what they are:

Scrum Team Roles

Before starting the Agile methodology for an application, we have to be clear on a few things, such as the user of the application and baseline document, which have the scope of the problems, values, and opportunities mentioned.

So in the agile methodology, the product owner has the vision and works with a team to deliver the vision. Here we are going to describe all the roles in this process:

User: In the above, we have already mentioned that for developing the application product, the first thing that comes to mind is the end-user or the customer.

Product owner: product owner is an expert and represents the stakeholders and acts like the customer's voice.

Development team: these are the group of professionals whose main aim is to deliver the product. Here the team represents developers, programmers, QA & designers.

Scrum Master: the main of a scrum master is to ensure that the understanding and execution of scrum is followed.

Scrum Events

Sprint: this is an iterative time frame where a goal is achieved. The timeframe should not exceed one calendar month and, in some organizations, are following 15 days print. This should be consistent throughout the development process.

Sprint planning: In the sprint planning, the scrum team comes together at the beginning of every sprint, where they are planning for the upcoming sprint.

Daily scrum: this meeting is carried out every day for 15 minutes. Where the whole team Share about their previous day achievements are discussed and also discuss their plans regarding their task. If they have some blockers that affect their daily tasks, they can share about that blocker this meeting.

Sprint review: it is an informal meeting which happens after every sprint. With the scrum team, discuss what goes well, what does not go well in the last sprint, and what should need to be an improvement for the upcoming sprint for better productivity.

Scrum Artifacts

Product backlog: this is maintained by the product owner, where the product owner mentioned the requirements for a product on a priority basis. Which includes features, functions, requirements, enhancement, and fixes.

Sprint backlog: this contains all the list of tasks and requirements that need to be accomplished in the coming print. to visualize the progress of the sprint tasks, some organizations are using the scrum task board. The scrum board contains three columns, which are to do, doing, and don't format.

Burndown Chart: this is a graphical representation of the amount of task remains. In this chart, the remaining work is represented in a vertical axis in time in the horizontal axis.

Product increment: this is one of the critical artifacts of agile methodology. It is also called product improvement, where we have noted down the amount of work completed during a sprint combined with all work during the previous sprint.