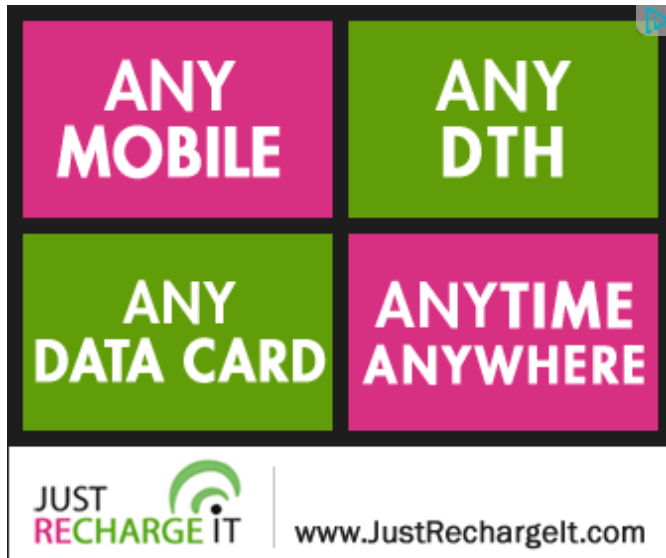


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Agile Testing, Scrum and eXtreme Programming



To understand the concept of agile testing, first let's understand-

What is Agile?

AGILE is a methodology that promotes continuous iteration of development and testing throughout the software development life cycle of the project. Both development and testing activities are concurrent unlike the Waterfall method.

I hope we got an idea of Agile!!! Now, we can step on to Agile Testing.



What is Agile Testing?

Unlike the WaterFall method , Agile Testing can begin at the start of the project with continuous integration between development and testing. Agile Testing is not sequential (in the sense its executed only after coding phase) but continuous.

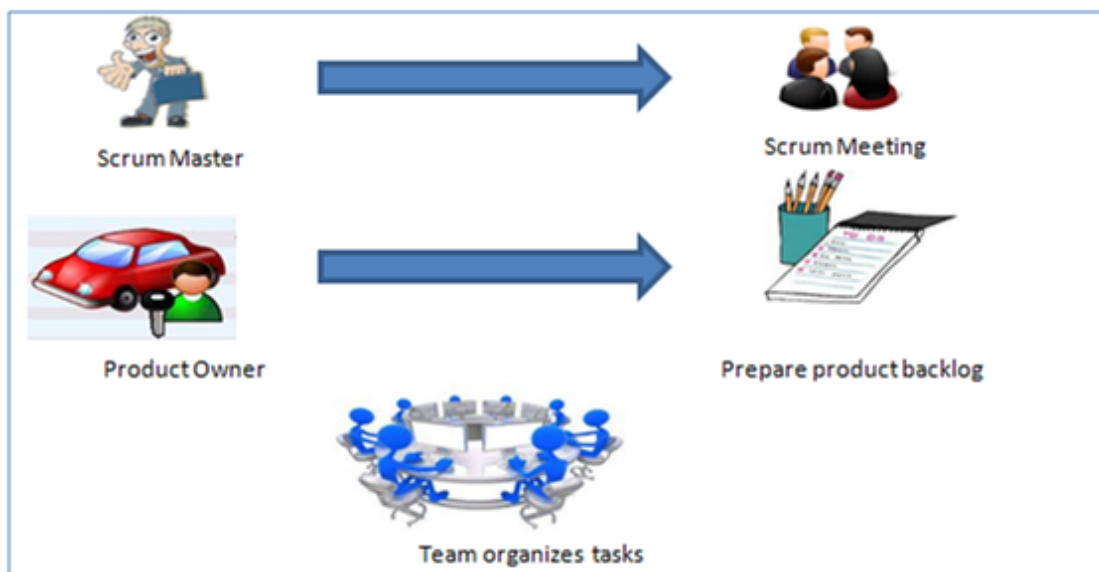
Agile team works as single team towards a common objective of achieving Quality .Agile Testing has shorter time frames called iterations (say from One to Four weeks). This methodology is also called release or delivery driven approach since it gives better prediction on the workable products in short duration of time.

Methodologies of Agile Testing

There are various methodologies present in agile testing and those are listed below:

Scrum

SCRUM is an agile development method which concentrates particularly on how to manage tasks within a team based development environment. Basically, Scrum is derived from activity that occurs during rugby match. Scrum believes in empowering the development team and advocates working in small teams (say- 7 to 9 members). It consists of three roles and their responsibilities are explained as follows:



- Scrum Master
 - Master is responsible for setting up the team, sprint meeting and removes obstacles to progress
- Product owner
 - The Product Owner creates product backlog, prioritizes the backlog and is responsible for the delivery of the functionality at each iteration
- Scrum Team
 - Team manages its own work and organizes the work to complete the sprint or cycle

Product Backlog

This is repository where requirements are tracked with details on the no of requirements to be completed for each release. It should be maintained and prioritized by scrum master and it should be distributed to the scrum team. Team can also request for new requirement addition or modification or deletion

Phases of Scrum testing:

There are three phases of scrum testing ,elaborated as follows:

- Test Design
 - User stories are used for development of test cases .User stories are written by the product owner. User stories are short description of functionalities of the System Under Test. Example for Insurance Provider is – Premium can be paid using online system
 - Test Cases are developed based on user stories which should be approved by business analysts and the customers
- Test Execution
 - Test execution is carried out in a lab where both tester and developer work hand in hand.

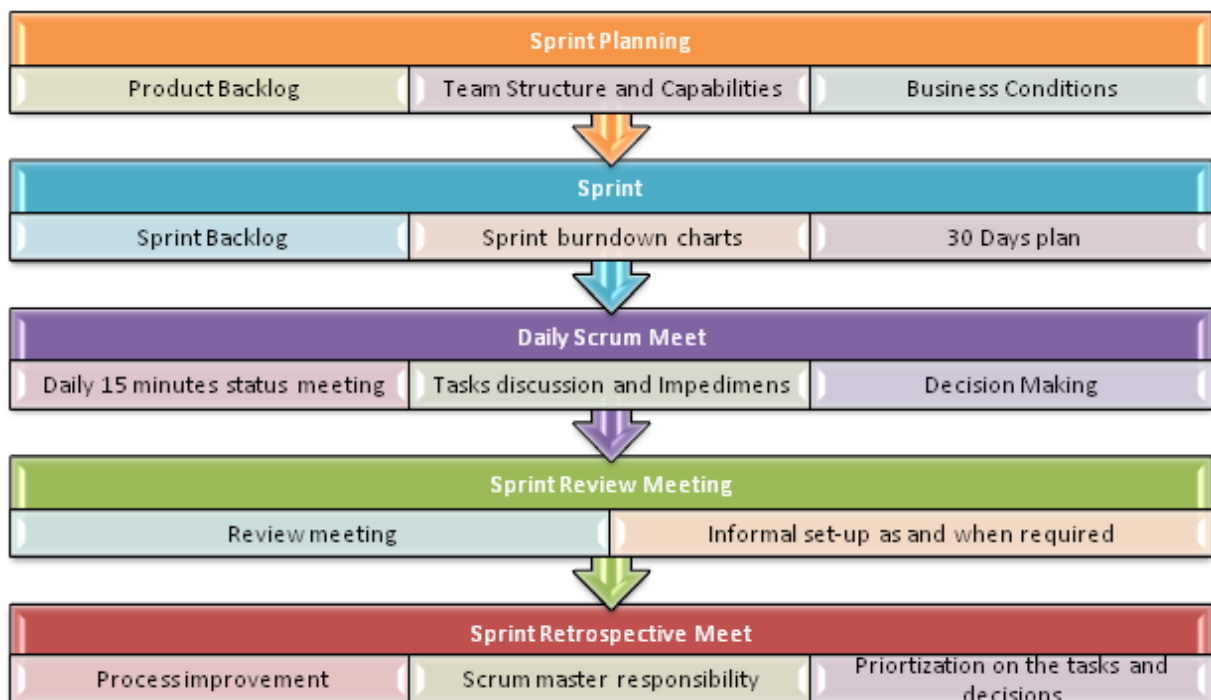
- Defect are logged in Defect Management tool which are tracked on a daily basis. Defects can be discussed during scrum meeting
- Defects are retested as soon as it is fixed and deployed for testing
- Test Automation
 - This also gains importance due to short delivery timelines
 - Test Automation can be achieved by utilizing various opensource or paid tools available in the market .
 - This proves effective in ensuring that everything that needs to be tested was covered. Sufficient Test coverage can be achieved with the close interaction with the team.
- Managing
 - Sprint(Cycle) meeting is held at the beginning to decide the scope of sprint, understand the product backlog, task estimates and assignments
 - Daily 15 minutes meeting will be held where participants answer three questions.
 - Last 24 hours tasks
 - Plan for next 24 hours tasks
 - What are all obstructions of the tasks?

Sprint Burn down Charts

Each day, Scrum Master records the estimated remaining work for the sprint. This is nothing but the Burn Down Chart. It is updated daily.

Scrum Practices

Practices are described in detailed:



Process flow of Scrum:

Process flow of scrum testing is as follows: