**What is Agile Testing?  
Ans.** Agile Testing is a practice that a QA follows in a dynamic environment where testing requirements keep changing according to the customer needs.

**What is the difference between burn-up and burn-down chart?**

**Ans.** Burn-up and burn-down charts are used to keep track of the progress of the project.

Burn-up charts represent how much work has been completed in any project whereas Burn-down chart represents the remaining work in a project.

**Define the roles in**[**Scrum**](https://www.softwaretestinghelp.com/agile-scrum-methodology-for-development-and-testing/)**?**

**Ans.** There are mainly three roles that a Scrum team have:

1. Project Owner – who has the responsibility of managing the product backlog. Works with end users and customers and provide proper requirement to the team to build the proper product.
2. Scrum Master – who works with scrum team to make sure each sprint gets complete on time. Scrum master ensure proper work flow to the team.
3. Scrum Team – Each member in the team should be self-organized, dedicated and responsible for high quality of the work.

**What is Product backlog & Sprint Backlog?**

**Ans.** Product backlog is maintained by the project owner which contains every feature and requirement of the product.

Sprint backlog can be treated as subset of product backlog which contains features and requirements related to that particular sprint only.

**Explain Velocity in Agile?**

**Ans.** Velocity is a metric that is calculated by addition of all efforts estimates associated with user stories completed in a iteration. It predicts how much work Agile can complete in a sprint and how much time will require to complete a project.

**How the velocity of sprint is measured?**

**Ans.** If capacity is measured as a percentage of a 40 hours weeks then completed story points \* team capacity

If capacity is measured in man hours then Completed story points / team capacity

**How long the scrum cycle last?**

**Ans. 1)** Basically, Scrum cycle depends on the project size and the team size. Team size may vary from 3 members to 9 members.  Normally it takes 3 to 4 weeks to complete a scrum sprint. On an average, a scrum sprint ends in 4 weeks.

**What is Agile manifesto?**

**Ans.** Agile manifesto defines an iterative and people-centric approach to software development. It has basically 4 key values and 12 principals.

**Following are the typical ceremonies of scrum**

**Ans.**

1. Backlog Grooming
2. Sprint planning
3. Daily Standup
4. Sprint Review
5. Sprint Retrospective

**Backlog Grooming**

Product backlog is a prioritized work items/userstories that are needed to bring the product in to fruition. It is managed by the product owner in collaboration with Scrum Master and the team. Backlog of the product is an ever changing list based on the new features, modifications, findings etc. The aim of grooming is to keep the userstories in a prioritized manner where immediate ones are also properly estimated and ready for consumption in the sprints.

**Sprint Planning**

The first ceremony is the sprint planning where the team sits and decide which backlog items( these are the broken down high-level description of all the work needed to bring the product into realization called stories or epics). During this session the product owner who has the customer inputs and release planning gives the team information on the priority of the backlog items.

**Daily Standup**

Daily Standup/Daily Scrum is a daily meeting for the team to do a quick check on the status and resolves issues blocking the team. This is a short meeting where each member of the team answers the following questions,

* What did I do yesterday?
* What will I be doing today?
* Is there anything blocking my progress which can effect the goal of the sprint.

The scrum master has the role here to make sure that the updates are specific and the meeting does not diverge into unrelated discussions

**Sprint Review**

This meeting is at the end of the sprint where the team along with Product Owner, potentially customer meets to make sure that the sprint goal is achieved. The team goes through the demonstration of the product and confirms that the outcome is as the expectation of product owner and customer. Partially done items are not demoed and they are put back into the product backlog.

**Sprint Retrospective**

This is the meeting to analyze the sprint data and see to answer following questions,

* What went well
* What went wrong
* What could have been better

In this meeting the team comes up with a plan to correct the mistakes, resolve the team conflicts. This is an opportunity where team members openly discuss about the problems and corrective actions that needs to be taken in the sub-sequent sprints.

**Explain Pair Programming and its benefits?**

**Ans.** Pair programming is a technique in which two programmer works as team in which one programmer writes code and other one reviews that code. They both can switch their roles.

Benefits:

1. Improved code quality: As second partner reviews the code simultaneously, it reduces the chances of mistake.
2. Knowledge transfer is easy: One experience partner can teach other partner about the techniques and codes.

**What is re-factoring?**

**Ans.** Modification of the code without changing its functionality to improve the performance is called re-factoring.

**What is a test stub?**

**Ans.** A small code which mimics a specific component in the system and can replace it. Its output is same as the component it replaces.

**What is difference between Epic, User stories & Tasks?**

**Ans. User Stories:**User Stories defines the actual business requirement. Generally created by Business owner.

**Task:**To accomplish the business requirements development team create tasks.

**Epic:** A group of related user stories is called an Epic.

**What is a Task board in Agile?**

**Ans.** Task board is dash board which shows progress of the project. It contains:

1. User Story: which has the actual business requirement.
2. To Do: Tasks that can be worked on.
3. In Progress: Tasks in progress.
4. To Verify: Tasks pending for verification or testing
5. Done: Completed tasks.

**What is Test Driven Development (TDD)?**

**Ans.** It is Test-first development technique in which we add a test first before we write a complete production code. Next we run the test and based on the result refactor the code to fulfill the test requirement.

**What is Scrum ban?**

**Ans.** It is a software development model which is combination of scrum and kanban. Scrumban is considered for maintenance projects in which there are frequent changes or unexpected user stories. It can reduce the minimum completion time for user stories.

**What is Zero sprint in Agile?**

**Ans.** It can be defined as pre step to the first sprint. Activities like setting development environment, preparing backlog etc needs to be done before starting of the first sprint and can be treated as Sprint zero.

**What is Spike?**

**Ans.** There may be some technical issues or design problem in the project which needs to be resolved first. To provide the solution of these problem “Spikes” are created. Spikes are of two types- Functional and Technical.

**Name some Agile quality strategies.**

**Ans.** Some Agile quality strategies are-

1. Re-factoring
2. Small feedback cycles
3. Dynamic code analysis
4. Iteration
5. **Explain ‘scrum poker’ or ‘planning poker’ technique?**
6. **Ans. 6)** Scrum poker also called as planning poker, is a card-based estimation technique which is based on a general agreement.
7. 1) To start it, the agile user story is read either by the customer or the owner and the estimator understand its features.
8. 2) Each estimator has planning cards with different no. on it like 0,1,2,3,5,8 and so on. These values on the card are ideal days or story points.
9. 3) Estimator select cards based on their estimation by discussing features set by the product owner.
10. 4) If a common value is selected, it is an estimate, if not they discuss their max. and min. estimation.
11. 5) This process is repeated till a general agreement is reached.

**What are the principles of agile testing?**

**Ans. 7)** Some major principles of agile testing are:

* Customer satisfaction
* Bug-free clean code
* Changes are welcome by customer
* Whole team business people and developers work collectively
* Instead of lengthy documentation, focus on essence
* It focuses on face to face conversation
* It promotes sustainable development

**Scrum and Kanban** are both iterative work systems that rely on process flows and aim to reduce waste. However; there are a few main differences between the two:

|  |  |  |
| --- | --- | --- |
|  | **Kanban** | **Scrum** |
| Roles & Responsibilities | There are no pre-defined roles for a team. Although there may still be a Project Manager, the team is encouraged to collaborate and chip in when any one person becomes overwhelmed. | Each team member has a predefined role, where the Scrum master dictates timelines, Product owner defines goals and objectives and team members execute the work. |
| Due Dates / Delivery Timelines | Products and processes are delivered continuously on an as-needed basis (with due dates determined by the business as needed). | Deliverables are determined by sprints, or set periods of time in which a set of work must be completed and ready for review. |
| Delegation & Prioritization | Uses a “pull system,” or a systematic workflow that allows team members to only “pull” new tasks once the previous task is complete. | Also uses a “pull system” however an entire batch is pulled for each iteration. |
| Modifications / Changes | Allows for changes to be made to a project mid-stream, allowing for iterations and continuous improvement prior to the completion of a project. | Changes during the sprint are strongly discouraged. |
| Measurement of Productivity | Measures production using “cycle time,” or the amount of time it takes to complete one full piece of a project from beginning to end. | Measures production using velocity through sprints. Each sprint is laid out back-to-back and/or concurrently so that each additional sprint relies on the success of the one before it. |
| Best Applications | Best for projects with widely-varying priorities. | Best for teams with stable priorities that may not change as much over time. |