

Methodology Overview

The software development methodology is a process by which developers design, implement, and test new computer software projects. It involves:

- How to develop and test a project
- How to release the project
- How to manage the roadmap and project milestones

Agile Methodology

The Agile methodology is a way to manage a project by breaking it up into several phases. Here's an example of an Agile approach:

- Make a plan for 15 days.
- Development according to the plan.
- Test the project according to the plan.
- Get feedback from the customer.
- Start the next plan.

Agile Framework

Main types of Agile frameworks include:

1) Scrum

Scrum is a framework of Agile methodology that organizes work into short, time-boxed iterations called sprints (1-4 weeks). It focuses on delivering a potentially shippable product increment at the end of each sprint.

Key Elements

- **Product Backlog:** A prioritized list of all tasks/features to be done.
- **Sprint Backlog:** Tasks selected for the current sprint.
- **Daily Stand-ups:** Short daily meetings to track progress.
- **Sprint Reviews and Retrospectives:** Meetings to reflect on the sprint's work and improve.

Roles

- **Product Owner:** Represents the customer, manages the backlog.
- **Scrum Master:** Ensures the Scrum process is followed and removes blockers.

- **Development Team:** Executes the work and delivers increment.

2) Kanban

Kanban is another Agile framework that emphasizes continuous delivery and improvement by visualizing the workflow and limiting work in progress.

Sprint

A sprint is a short, time-boxed period when a Scrum team works to complete a set amount of work. Sprint duration should be less than 4 weeks.

Plan and Execution of a Sprint

- Estimate how much work can be done.
- Sprint Grooming.
- Daily Scrum meeting.
- Sprint Retrospective.
- Sprint Demo.