# 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.