

**What Is Agile:**

Agile is a set of principles for software development under which requirements and solutions evolve through the collaborative effort of cross-functional teams.

**Goal:**

Deliver high-quality products faster and adapt quickly to changes.

**Agile Values & Principles:**

Values (from the Agile Manifesto):

1. Individuals and interactions over processes and tools
2. Working software over comprehensive documentation
3. Customer collaboration over contract negotiation
4. Responding to change over following a plan

**Principles:**

There are 12 principles, including frequent delivery, welcoming changing requirements, and close daily cooperation.

**Agile Frameworks:**

Most popular frameworks are -

- Scrum
- Kanban
- Extreme Programming

**Agile Process:**

1. Planning :
  - a. create product backlog
  - b. Prioritize items based on business values
  - c. Define sprint goal (for scrum)
2. Execution:
  - a. Team selects items to work on for the sprint/iteration
  - b. Daily standup meetings to discuss progress and obstacles.
  - c. Collaborative work, testing, and integration.
3. Review:
  - a. End of sprint/iteration: Demonstrate completed work to stakeholders
  - b. Get feedback and adjust backlog if needed.
4. Retrospective:
  - a. Team reflects on what went well, what didn't, and how to improve.

**Roles in Agile:**

- ❖ Product Owner: Defines priorities, clarifies requirements.
- ❖ Scrum Master: Ensures process is followed, removes blockers.
- ❖ Team Members: Develop, test, and deliver the product.

**Benefits:**

- Faster delivery
- Higher customer satisfaction
- Flexibility and adaptability
- Continuous improvement

**Common Challenges:**

- Resistance to change
- Unclear requirements
- Lack of collaboration
- Scope creep

**Summary:**

Agile is about being flexible, delivering value quickly, and working collaboratively. Embrace change, communicate often, and focus on delivering working software.