

# GB Agile Methods Course

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## Introduction to Agile Methods

Agile methods are project management approaches that emphasize collaboration, flexibility, continuous improvement, and iterative deliveries. They are often used in software development to quickly adapt to changes.

## Principles of the Agile Manifesto

The Agile Manifesto is based on 4 core values: - **Individuals and interactions** over processes and tools

- **Working software** over comprehensive documentation
- **Customer collaboration** over contract negotiation
- **Responding to change** over following a plan

## Agile Methodologies

There are several agile methods, including: - **Scrum**: a structured method based on roles, events, and artifacts

- **Kanban**: a visual task management approach
- **Extreme Programming (XP)**: a method focused on development best practices

## Scrum: A Structured Agile Method

### Scrum Roles

- **Product Owner**: responsible for the product backlog, representing business needs
- **Scrum Master**: team facilitator, ensuring proper application of Scrum
- **Developers**: team members delivering the product

### Artifacts

- **Product Backlog**: ordered list of requirements and features
- **Sprint Backlog**: selected subset of the Product Backlog for a Sprint
- **Increment**: functional product delivered at the end of the Sprint

### Scrum Events

- **Sprint**: iteration lasting 1 to 4 weeks
- **Sprint Planning**: planning meeting at the start of the Sprint
- **Daily Scrum**: daily team sync meeting (~15 min)
- **Sprint Review**: end-of-sprint demo and review
- **Sprint Retrospective**: meeting to improve the process

## Kanban: Visualizing to Manage Better

Kanban is based on a visual board with columns (e.g., To Do, In Progress, Done).

### Kanban Principles

- Visualize workflow
- Limit work in progress (WIP)
- Manage flow
- Make policies explicit
- Continuous feedback loops
- Collaborative improvement

## Tools

- Kanban board (physical or digital: Trello, Jira, etc.)
- Cards or tickets representing tasks

## Agile Glossary

- **Agile**: adaptive methodology based on short cycles
- **Backlog**: prioritized list of items to develop
- **Burn-down Chart**: graph showing remaining work in a Sprint
- **Daily Scrum**: daily team sync meeting
- **Definition of Done (DoD)**: criteria that define task completion
- **Epic**: large feature broken into several User Stories
- **Increment**: deliverable and potentially usable product version
- **Kanban**: visual flow management system
- **Planning Poker**: estimation technique using cards
- **Product Owner (PO)**: represents the client and manages backlog priorities
- **Retrospective**: meeting to review and improve after a Sprint
- **Scrum**: Agile method using sprints and defined roles
- **Scrum Master**: ensures Scrum framework is applied
- **Sprint**: fixed development period (1–4 weeks)
- **Sprint Review**: demo of the product at Sprint's end
- **Story Points**: unit for estimating complexity
- **Task Board**: visual task tracking board
- **User Story**: functional description of a user need
- **Velocity**: Scrum team delivery speed

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This document is an introduction to Agile methods, intended to help you discover the basics and structure your projects in a collaborative and iterative way.