

## Tutorial 04

01. What is a software development methodology and why is it important in the software development process?

Software development methodology refers to structured processes involved when working on a project. Software development methodology provides a platform for developers to work together more efficiently as a team.

02. What are the main differences between traditional (waterfall) and iterative (Agile) methodologies?

### Traditional

- Used to develop simple software.
- Testing is done once the development phase is completed.
- Follows a linear organization structure.
- It provides less security.
- Development cost is less.

### Iterative

- Used to develop complicated software.
- Testing and development processes are performed concurrently.
- Follows an iterative organizational structure.
- It provides high security.
- Development cost is high.

03. What are the key components of the Scrum framework in Agile methodology?

Scrum Master, Scrum Product Owner and The Scrum Team, Daily Scrum, Sprint planning, Sprint review

04. What are the challenges and considerations when selecting and implementing a specific software development methodology for a project?

Product owner, Scrum master, development team, product backlog, sprint, sprint planning, daily Scrum, sprint review, sprint retrospective

05. What is Agile methodology and what are its key principles and values?

The Agile methodology is a project management approach that involves breaking the project into phases and emphasizes continuous collaboration and improvement.

key principles

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

values

- Individuals and interactions.
- Working software
- Custom collaboration
- Responding to change

06. How does agile differ from traditional waterfall methodologies?

Agile follows an iterative process where projects are divided into sprints of a shorter span. Unlike the traditional approach, less time is spent on upfront planning and prioritization as agile is more flexible in changes and specifications developments.