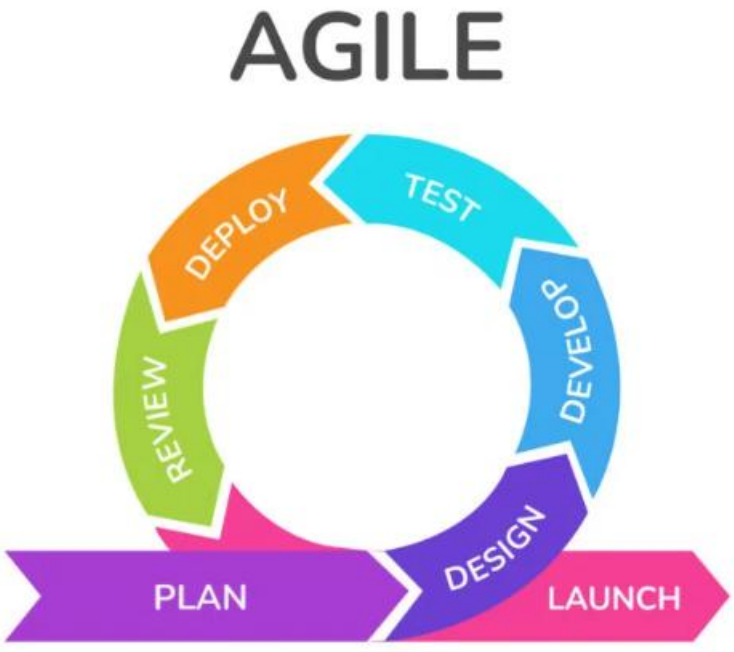
AGILE

What is Agile Methodology

Agile is a software development methodology that focuses on iterative development, continuous feedback, collaboration, and flexibility to deliver high-quality software faster and more efficiently.

Agile Principles

1. Customer Satisfaction – Our highest priority is to satisfy the customer through early and continuous delivery of valuable software.
2. Changing Requirement – Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage.
3. Frequent Delivery – Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.
4. Promoting Collaboration – Business people and developers must work together daily throughout the project.
5. Motivated Individuals – Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done.
6. Face to Face Communication – The most efficient and effective method of conveying information to and within a development team is face-to-face conversation.
7. Maintain a constant pace – Agile processes promote sustainable development. The sponsors, developers and users should be able to maintain a constant pace indefinitely.
8. Measure Progress – Working software is the primary measure of progress.
9. Technical Excellance – Continuous attention to technical excellence and good design enhances agility.
10. Simplicity – Simplicity- the art of maximizing the amount of work not done - is essential.
11. Self organized Teams – The best architectures, requirements, and designs emerge from self-organizing teams.
12. Continuous Improvements - At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly.



Agile Life cycle

Agile Life Cycle

It includes –

1. Requirement Gathering (Plan)
2. Design
3. Development / Coding
4. Testing
5. Deployment
6. Review / Maintenance

Agile Advantages

• No need in long documentation and detailed specification • Easy adjustment to new requirements

• Process visibility and high interaction between a customer and a team

• Knowledge sharing for making better decisions

• Reduced project development time frames

• Business risks are minimized

SCRUM

What is SCRUM

Scrum is a management framework that teams use to self-organize tasks and work towards a common goal. Scrum is a management framework that teams use to self-organize and work towards a common goal.

Life Cycle of SCRUM

1. Sprint – A sprint is time box. New sprint starts immediately after completion of previous sprint.
2. Sprint Review - If the product still has some non-achievable features, it will be checked in this stage and then passed to the Sprint Retrospective stage.
3. Sprint Retrospective – Quality / status of product is checked in this stage.
4. Sprint Backlog – Sprint backlog is divided into 2 parts Product assigned features to sprint and sprint planning meeting.

Advantage of Scrum framework

- Scrum framework is fast moving and money efficient.
- Scrum framework works by dividing the large product into small sub-products. It's like a divide and conquer strategy
- In Scrum customer satisfaction is very important.
- Scrum is adaptive in nature because it have short sprint.
- As Scrum framework rely on constant feedback therefore the quality of product increases in less amount of time

Scrum Roles

1. Product Owner –

 Responsibility: Maximizing the value of the product.

 Manages the Product Backlog (list of features, changes, bug fixes).

 Decides **what to build** and in **what priority**.

 Represents the **customer/stakeholders** and ensures their needs are met.

 Accepts or rejects the work delivered by the team.

Duties of Product Owner:

Defines **User Stories** (requirements in simple form).

Prioritizes backlog items based on business value.

Communicates vision and goals to the team.

Ensures the team works on the **most valuable features first**.

2. Scrum Master –

• **Responsibility:** Facilitates the Scrum process and ensures the team follows Scrum principles.

• Acts as a **coach/servant leader** for the team.

• Removes obstacles that block the development team.

• Not a manager, but a **facilitator**.

• Ensures Scrum ceremonies (Sprint Planning, Daily Scrum, Review, Retrospective) happen effectively.

Duties of Scrum Master:

- Guides the team in **Scrum adoption and practices**.
- Shields the team from external interruptions.
- Encourages collaboration and self-organization.
- Helps resolve conflicts and improves team productivity.
- Works with Product Owner to ensure backlog clarity.

- **Product Owner = Defines WHAT to build (vision, features, priorities).**
- **Scrum Master = Ensures HOW Scrum is followed (process, coaching, removing obstacles).**