

1a) SCRUM

Scrum is an agile project management methodology. It follows the principles and values of agile. Scrum addresses complexity in work by making information transparent so that people can inspect and adapt and make adjustments to the current problems rather than predicted problems.

Scrum delivers transparency of common terms and standards in development to ensure that what is being delivered is what was expected.

b) KANBAN

It's a visual system for managing work as it moves through a process. It is designed to help visualize work, maximize efficiency and be agile.

The whole idea of kanban system is to create a smooth heat flow.

c) Extreme programming(XP) is a software development methodology which is intended to improve software quality and responsiveness to changing customer requirements. It advocates frequent development cycles which is intended to improve productivity and introduce checkpoints at which new customer requirements can be adopted. It emphasizes teamwork in a way that managers, customers and developers are all equal partners in a collaborative team.

2) Members of an Agile team includes

Product owner

Developers team

Scrum master

Product owner

The Product Owner is the project's key stakeholder, usually an internal or external customer, or a spokesperson for the customer. There is only one Product Owner who conveys the overall mission and vision of the product which the team is building. The product owner is accountable for managing the product backlog and accepting completed increments of work.

Development Team

The development team is a self-organizing, group of people armed with all of the skills to deliver shippable increments at the completion of each sprint. Development team includes designers, software engineers, testers.

Scrum master

The Scrum master is more of a facilitator, he is the servant leader to the Product Owner, Development Team and Organization. ScrumMaster ensures that the team adheres to Scrum theory, practices, and rules. The ScrumMaster protects the team by doing anything possible to help the team perform at the highest level. This may include removing impediments, facilitating meetings, and helping the Product Owner groom the backlog.

3) Project management tools includes:

Trello

Jira

Workzone

Podio

Basecamp

4) Phases of software development life cycle

Planning

Building

Testing

Review

Deploy