Group 10   Software Engineering

SCRUM VS XP
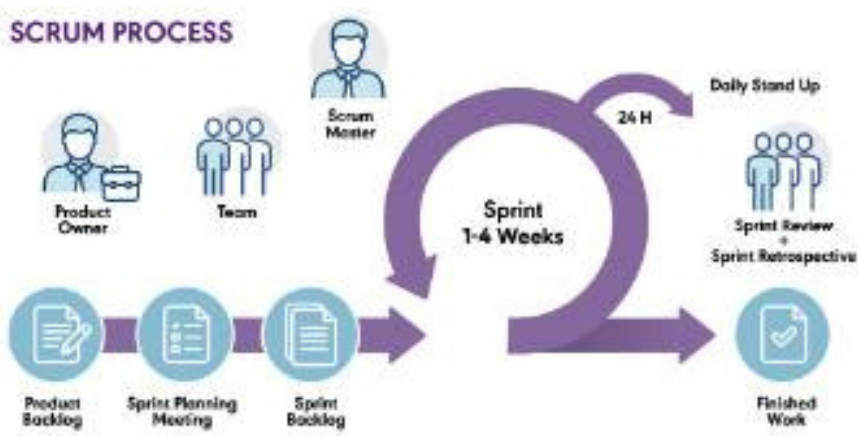
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1 SCRUM

**Agile method** -- foucses on managing iterative developement

Phases

1 Initial
- Outline planning phase
- establish objective

2 Series of sprint cycles
- cycle develops increment

3 Wrap up
- complete documentation

Terminology

Process

- Each **iteration** consists of **2-4 weeks**
- Goal of each sprint -- build the most important features
- Focuses on delivering several iteration to provide stakeholder the highest business value
- **Selection phase** involves all project team to select features
- **Developement stage** -- isolated from customer, communicate through 'Scrum Master'
  - **Scrum Master** -- protect development team from distraction, arranges daily meeting, tracks backlog, records decision
  - End of **sprint**, work reviewed and presented to stakeholders
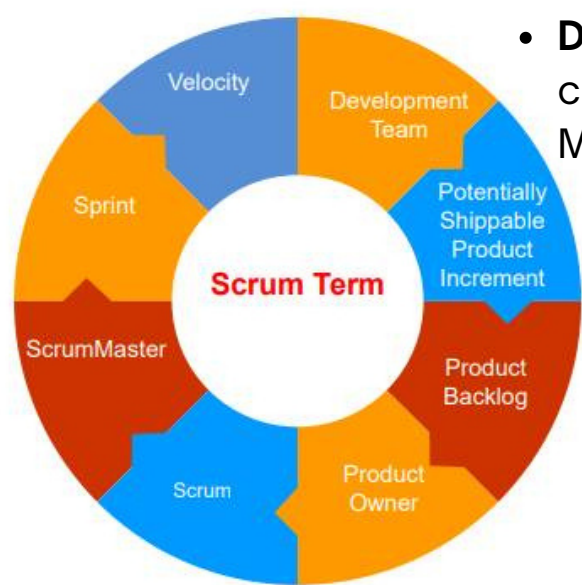
2 EXTREME PROGRAMMING (XP)

Introduction
Agile software development methodology

Process & Release Cycle
- Follows an iterative and incremental process, with releases every few weeks or months.

- Customers are involved in **offering input** and prioritising features for each release.
- The team is **dedicated to producing high-quality code**, with testing and other best practises.
- The goal is to provide value to the consumer as rapidly as feasible while retaining high quality and flexibility.

Key Practices of XP

- **User stories:** Used to prioritise work and ensure that the team is providing value to the customer with each iteration.
- **Refactoring:** Process of making minor, incremental changes to a piece of code in order to improve its readability, maintainability, and performance.
- **Test-first development:** Technique that involves writing tests before producing code to guarantee that the code works properly.
- **Pair programming:** Practise of two developers working on the same code at the same computer. Pair programming helps team members increase code quality and information sharing.

3 ADVANTAGES & DISADVANTAGES

ADVANTAGES	DISADVANTAGES
- Adaptability and flexibility - Creativity and innovation - Lower costs - Continuous feedback improves customer satisfaction - Increases motivation and team satisfaction - Increased transparency often leads to higher quality work	- Need experienced team members - Requires lots of training - Difficult to scale - Hard to integrate with a classic project management approach - Require major transformation within an organization

ADVANTAGES	DISADVANTAGES
- Robust software - Fast development - Low cost of change - Error avoidance - Lean product - Desired Product - Teams` well-being	- Lots of effort - Customer must participate - Relatively high costs - Location restriction - Stress

4 SCRUM VS XP

- Focuses on management; concerned with productivity
- No new changes allowed while sprint in progress
- Scrum master communicate with product owner during development
- Openness, focus, commitment

- Focuses on providing quality of software, engineering and feedback technique
- Flexibility; changes can be made by customer during sprint
- Product owner communicate with team developers
- Communication, simplicity, feedback