Assignment - Agile Methodology [Major]

Design a scrum framework which includes scrum roles, activities of scrum and the time duration in the scrum.

▪ Overview

Scrum is a **framework** for organizing and managing work. The Scrum framework is based on a set of values, principles, and practices that provide the foundation to which a company adds its peculiar implementation of engineering practices and specific approaches for realizing the Scrum practices. The outcome is a version of Scrum that is unique and specific, in order to have a process that works for us.
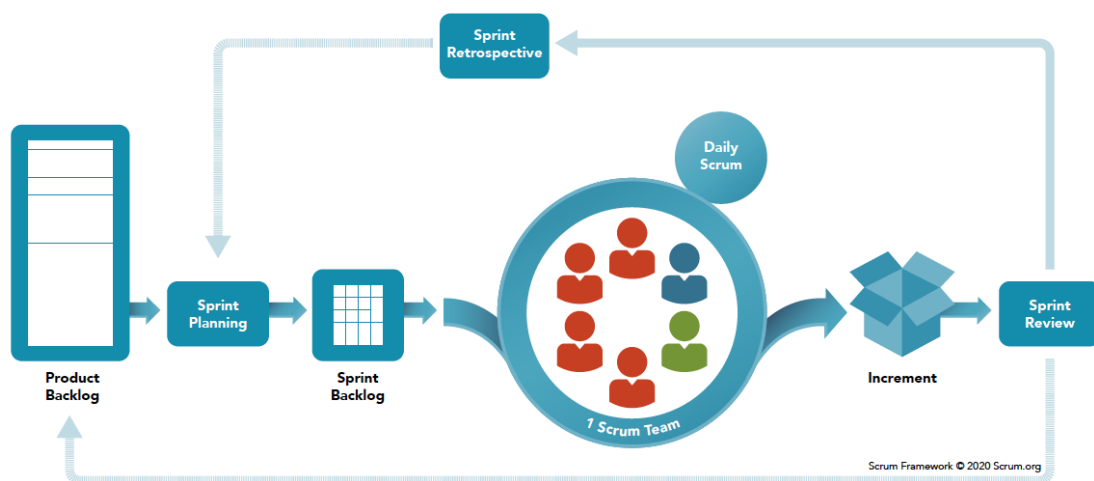
▪ SCRUM ROLES

Scrum development efforts consist of one or more **Scrum teams**, each made up of three Scrum roles: **Product owner**, **ScrumMaster**, and the **Development team.**

Product Owner

- is the empowered central point of product leadership
- is the only authority responsible for what will be developed and in what order
- he maintains and communicates to all other participants a clear vision of what the Scrum team is trying to achieve.

ScrumMaster

- helps everyone involved understand and embrace the Scrum values, principles, and practices
- acts as a coach, providing development process leadership
- as a facilitator, ScrumMaster helps the team resolve issues and make improvements to its use of Scrum.

Development Team

Traditional software development consists of various job types, such as architect, programmer, tester, database administrator, UI designer, etc. Scrum defines a development team as a diverse, cross-functional collection of people who are responsible for designing, building, and testing the desired product.

- the development team self-organizes to determine the best way to accomplish the goal set out by the product owner
- is typically five to nine people in size; its members must collectively have all skills needed to produce good quality, working software.

SCRUM ACTIVITIES

❖ Sprint Planning:

1. Duration: Usually 4 hours for a 2-week sprint (can vary based on the sprint length).
2. Purpose: The Product Owner and the Development Team collaborate to define the sprint goal and select items from the product backlog to be worked on during the sprint. The Development Team also creates a sprint backlog, which includes the tasks necessary to complete the selected items.

❖ DAILY SCRUM (STAND-UP):

- ❖ Duration: Typically 15 minutes.
- ❖ Frequency: Held daily, at the same time and place.
- ❖ Purpose: The Development Team members share their progress since the last daily scrum, discuss any challenges or impediments they're facing, and plan their work for the next 24 hours.

❖ Sprint Review:

- ❖ Duration: Usually 2 hours for a 2-week sprint (can vary based on the sprint length).
- ❖ Purpose: The Development Team presents the completed work to the stakeholders and receives feedback. The Product Owner reviews the product backlog and discusses potential changes based on the feedback.

❖ SPRINT RETROSPECTIVE:

- ❖ Duration: Typically 1.5 to 2 hours.
- ❖ Purpose: The Scrum Team reflects on the previous sprint and identifies areas for improvement. They discuss what went well, what didn't, and come up with action items to enhance their processes and practices in the next sprint.
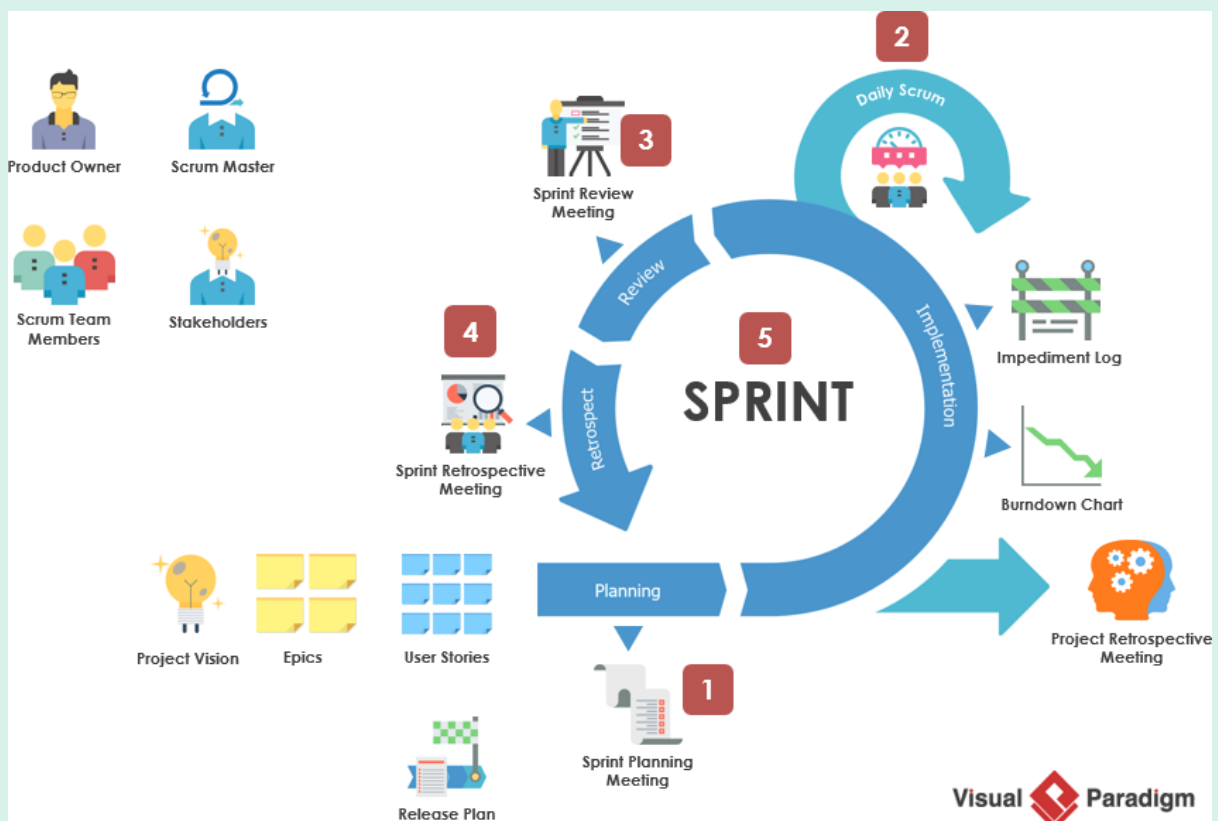
▪ TIME DURATION

In Scrum, time durations are an essential aspect of planning and executing projects. Here's a brief overview of the time durations commonly used in Scrum:

1. ***Sprint Duration***: A sprint is a time-boxed iteration in Scrum during which the development team works to create a potentially shippable product increment. The sprint duration is the length of time allocated for completing the sprint's planned work. While the Scrum Guide does not specify a fixed duration, sprints typically range from one to four weeks, with two weeks being the most common choice.

2. ***Daily Scrum Timebox:*** The Daily Scrum, also known as the daily stand-up, is a short meeting held by the development team every day during a sprint. The purpose is to synchronize activities, share progress updates, and identify any impediments. The Daily Scrum timebox is typically set to 15 minutes or less, allowing team members to quickly communicate their status and coordinate their work.

3. ***Timeboxing Meetings:*** Scrum employs timeboxing as a technique to ensure that meetings have a defined duration and stay focused. Timeboxing involves allocating specific time limits for each agenda item. For example, the Sprint Planning meeting may have a timebox of two hours per week of sprint duration, while the Sprint Review and Sprint Retrospective meetings usually have a timebox of around three hours for a four-week sprint.

4. ***Timebox for Product Backlog Refinement:*** Product Backlog Refinement, also known as backlog grooming, is a regular activity in Scrum where the product backlog is reviewed and refined. The timebox for this activity can vary depending on the needs of the team and the size of the product backlog. It may range from one to four hours per sprint, with some teams allocating a fixed amount of time every week for refinement.

5. ***Timebox for Sprint Review:*** The Sprint Review is a collaborative meeting held at the end of each sprint to inspect and adapt the product increment. The timebox for the Sprint Review depends on the length of the sprint and the complexity of the work. Typically, it ranges from one to two hours for a two-week sprint and may be longer for longer sprints.