Scrum Master Certified (SMC®)

Content

I. General Knowledge

A. Agile Manifesto

The Agile Manifesto consists of four key values:

1. **Individuals and interactions** over processes and tools.
2. **Working software** over comprehensive documentation.
3. **Customer collaboration** over contract negotiation.
4. **Responding to change** over following a plan.

B. Scrum Foundations

1. Empirical and Defined Processes

- **Empirical Process Control** is based on observation and evidence, relying on feedback loops. Scrum is an empirical process with three key pillars: inspect, adapt, and transparency. These help ensure progress through continual adjustment based on real-time information.
- **Defined Processes** are based on predictable steps and best practices, often used in repeatable environments where variation is minimal.

2. Sprint

- **Iterative and Incremental**: Scrum follows an iterative-incremental approach where each Sprint builds on the previous one. This helps refine the product with each iteration, delivering functional increments quickly and efficiently.
- **Protected**: The Sprint is shielded from changes or interruptions. The team focuses solely on achieving Sprint goals.
- **Timeboxed**: A Sprint is limited to a fixed timeframe (usually 2-4 weeks). Timeboxing prevents scope creep and encourages efficiency.

3. The Significance of "Done"

- "Done" means having a potentially shippable product increment at the end of each Sprint. This ensures continuous progress toward business value and provides transparency regarding project status.

4. The Five Scrum Values

- **Commitment, Courage, Focus, Openness, and Respect**: Scrum practices align with these values to foster teamwork and a high-performance culture.

5. Applicability of Scrum

- Scrum is well-suited for complex, adaptive problems such as software development, research, and innovation-driven projects.

II. Scrum Roles

A. Overview of Scrum Roles

The three Scrum roles are:

1. **Product Owner**: Manages the product backlog and defines priorities.
2. **ScrumMaster**: Ensures the team adheres to Scrum principles.
3. **Development Team**: Self-organizes to deliver increments of functionality.

B. ScrumMaster

1. **Responsibilities**:
     - Implements and teaches Scrum, ensures adherence to Scrum values, and removes impediments.
     - Acts as a change agent by advocating Scrum practices across the organization.
     - Facilitates team collaboration and shields the team from interruptions during Sprints.
     - Coaches the team in Agile methodologies and productivity improvements.
2. **Authority**:
     - The ScrumMaster's authority is indirect, based on guiding the team in Scrum principles, not on making decisions for the team.

C. Product Owner

1. **Responsibilities**:
     - Maintains the Product Backlog and drives product success by aligning the team with business goals and user needs.
     - Collaborates with stakeholders and the team to refine backlog items and prioritize work.
2. **Authority**:
     - The Product Owner has full authority over backlog priorities and product release decisions but must respect the development team's Sprint commitments.

D. The Team

1. **Responsibilities**:
     - The team is self-organizing, accountable for delivering increments, and manages its Sprint backlog.
     - Participates in Sprint Planning, Daily Scrums, and Retrospectives.
2. **Authority**:

     o   The team has autonomy over how to accomplish tasks, but it is accountable for delivering potentially shippable products each Sprint.

III. Scrum Meetings

A. Sprint Planning Meeting

- **Objective**: Define Sprint goals and the work needed to achieve them.
- **Duration**: Typically timeboxed to 4 hours for a 2-week Sprint.
- **Participants**: ScrumMaster, Product Owner, and Development Team.

B. Daily Scrum Meeting

- **Objective**: Inspect progress and adapt plans for the day.
- **Duration**: 15 minutes, timeboxed.

C. Sprint Review Meeting

- **Objective**: Demonstrate the Sprint increment and gather feedback from stakeholders.

D. Sprint Retrospective Meeting

- **Objective**: Reflect on the past Sprint and identify improvements for the next Sprint.

E. Release Planning Meeting

- **Objective**: Plan product releases based on Sprint results and refined estimates.

IV. Scrum Artifacts

A. Product Backlog

1. **Definition**: An ordered list of user needs and other product requirements.
2. **Contents**: Backlog items include functional and non-functional requirements, risks, and technical work.
3. **Management**: Continuously refined through collaboration between the Product Owner and the Scrum Team.

B. Product Increment and Definition of Done

- A **Product Increment** represents the work completed during a Sprint.
- **Definition of Done** ensures that each increment is potentially shippable and fully meets the Product Owner's expectations.

C. Sprint Backlog

- The Sprint Backlog is a list of tasks the team commits to completing during a Sprint. The team tracks and updates its progress throughout the Sprint.