**Role Assignments in Scrum**

1. **Product Owner**:
   * **Responsibilities**:
     + Acts as the voice of the customer and represents the stakeholders.
     + Defines the product backlog and ensures the team works on the most valuable features.
     + Prioritizes the backlog items to maximize value for the customer.
     + Communicates the project vision and ensures the team understands it.
2. **Scrum Master**:
   * **Responsibilities**:
     + Facilitates Scrum ceremonies and ensures the team follows Scrum practices.
     + Removes obstacles that hinder the team’s progress.
     + Acts as a coach to the team, promoting self-organization and cross-functionality.
     + Shields the team from external distractions and ensures smooth collaboration between team members.
3. **Development Team**:
   * **Responsibilities**:
     + A cross-functional group responsible for delivering potentially shippable increments at the end of each sprint.
     + Self-organizes to achieve the sprint goals.
     + Collaborates closely with the Product Owner to understand the requirements and implement them.
     + Continuously improves through retrospectives and adjustments.

**Ceremonies in Scrum**

1. **Sprint Planning**:
   * **Who Attends**: Product Owner, Scrum Master, Development Team.
   * **Purpose**: Defines what can be delivered in the upcoming sprint and how the work will be achieved.
   * **When**: At the start of every sprint.
   * **Duration**: Usually 2-4 hours for a two-week sprint.
   * **Details**: The team discusses the product backlog items, clarifies questions, and commits to delivering a certain number of items based on team capacity.
2. **Daily Stand-up**:
   * **Who Attends**: Development Team, Scrum Master (optional for Product Owner).
   * **Purpose**: A quick, daily sync to discuss progress, blockers, and plans for the day.
   * **When**: Every day during the sprint, typically in the morning.
   * **Duration**: 15 minutes.
   * **Details**: Each team member answers three questions: What did I do yesterday? What will I do today? Are there any obstacles?
3. **Sprint Review**:
   * **Who Attends**: Product Owner, Scrum Master, Development Team, Stakeholders.
   * **Purpose**: To demonstrate the completed work to stakeholders and gather feedback.
   * **When**: At the end of every sprint.
   * **Duration**: 1-2 hours for a two-week sprint.
   * **Details**: The team showcases what was completed during the sprint, and the Product Owner updates the backlog based on feedback.
4. **Sprint Retrospective**:
   * **Who Attends**: Development Team, Scrum Master, (Product Owner may attend).
   * **Purpose**: Reflect on the sprint process and identify areas for improvement.
   * **When**: After the Sprint Review, at the end of every sprint.
   * **Duration**: 1-2 hours for a two-week sprint.
   * **Details**: The team discusses what went well, what could be improved, and agrees on actionable steps to improve future sprints.