**SSW 555 Agile Methods for Software Development**

**Homework 3**

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**Assume that your company has formed a team to develop some new features for the Canvas iPhone app. Initial planning has determined that the work can be done in about 5 sprints of 2 weeks each by a team consisting of 4 Developers, 1 Scrum Master and 1 Product Owner.**

**1. Describe what happens (and who does it) at each of the following events for one of the "middle" sprints:**

**a. Sprint Planning for Sprint 3**

**b. Daily Scrum during Sprint 3**

**c. Sprint Review for Sprint 3**

**d. Sprint Retrospective for Sprint 3**

**Answer 1:**

a. **Sprint Planning for Sprint 3**

* During the sprint planning meeting, the team selects some number of product backlog items, usually in the form of user stories, and identifies the tasks necessary to complete each user story. Most teams also estimate how many hours each task someone will take to complete it based on the previous Sprints.
* Probably the team has completed developing some features of the app. And the Product Owner has got some feedback from the Client for those developed features. So the team would review if there are new items from the feedback and if the initially planned items need to be restructured.
* Now with the refined new backlog, the PO will prioritize the user stories for the next Sprint.
* Thus, Sprint planning is a collaborative effort involving a Scrum Master, who facilitates the meeting, a Product Owner, who clarifies the details of the product backlog items and their respective acceptance criteria, and the Entire Agile Team of 4 developers, who define the work and effort necessary to meet their sprint commitment.

b. **Daily Scrum during Sprint 3**

* Now that the Sprint is planned, the development team and the Scrum Master attend the Daily standup meetings every day for first 15 minutes or so.
* During the daily scrum, each team member answers the following three questions:
* What did you do yesterday?
* What will you do today?
* Are there any impediments in your way?
* Now for the project of developing the Canvas iPhone app, each developer and Scrum Master will discuss in the meeting of what part of the feature did they design or develop, what they will do today to take the development process ahead and let others know and take help for technical difficulties if they have any. The Scrum Master may decide at this time if the Pair Programming practice is to be held so that the impediments are taken care of.
* Thus, the progress of the things planned in the Sprint is tracked and necessary actions are taken to maintain the progress during the daily Scrum meeting.

c. **Sprint Review for Sprint 3**

* In Scrum, each sprint is required to deliver a potentially shippable product increment. This means that at the end of each sprint, the team has produced a coded, tested and usable piece of software.
* So at the end of each sprint, a sprint review meeting is held. During this meeting, the Scrum team shows what they accomplished during the sprint. Typically, this takes demonstration to present a list of the new features.
* Participants in the sprint review typically include the product owner, the Scrum team, the Scrum Master, management, customers and developers from other projects.
* During the sprint review, the project is assessed against the sprint goal determined during the sprint planning meeting. Ideally, the team has completed each product backlog item brought into the sprint, but it's more important that they achieve the overall goal of the sprint.
* Thus, in this case the team will review if they have completed the features that were decided for Sprint 3 and present the completed features to all the stakeholders.

d. **Sprint Retrospective for Sprint 3**

* No matter how good a Scrum team is, there is always opportunity to improve. Although a good Scrum team will be constantly looking for improvement opportunities, the team should set aside a brief, dedicated period at the end of each sprint to deliberately reflect on how they are doing and to find ways to improve. This occurs during the sprint retrospective.
* The sprint retrospective is usually the last thing done in a sprint. Many teams will do it immediately after the sprint review.
* The entire team, including both the Scrum Master and the product owner should participate. You can schedule a scrum retrospective for up to an hour, which is usually quite sufficient.
* Thus, at the end of the Sprint, after developing certain features and testing them, the team will meet up and give improvements on how the planning would have been better or how to minimize the time complexities of developing certain features or how the work should have been distributed according to developer skills.
* The team comes up with the plan to address things that didn’t go well, continue doing things that they are doing good, and appreciate the hard-work put in by all the team members.

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**2. For each role on the team (Developer, Scrum Master, Product Owner) describe how they update or review the Burn-down chart at each of the events mentioned above, and why they perform each action.**

* The burndown chart is an essential part of any agile project and is a way for the team to clearly see what is happening and how progress is being made during each sprint.
* **Roles and how they update and review the chart:**

**1. Product Owner**

* The PO will certainly not maintain the sprint burn down chart. He is not involved in the day to day tasks of the Development team. Thus, product owner does not review or update the burn down chart.
* The product owner uses the burn down chart to plan and communicate releases.

**2. Scrum Master**

* The Scrum Master does not update the burn down chart.
* Scrum Master prints and analyses this updated Burndown before daily stand-up and brings it to the meeting.
* He may be keeping a track of the chart sometimes as the management expects the Scrum Master to track velocity.

**3. Developer**

* These are the only people responsible for maintaining a Sprint burn down chart. They can do so right after the daily Scrum. Just to keep track to see if they are on target of realizing the sprint goal.
* The Development Team can use it track the Sprint Backlog progress to the sprint goal.
* Now we will see how the development team updates the chart according to each of the events mentioned above:
* **Sprint Planning:**
  + By using the burn-down Chart the Agile team can plan their next Sprints likewise. If they a positive burn down chart, their plans are being well executed or otherwise they need change the sprint planning.
  + If some items are remaining, they are carried forward onto the next Sprint.
* **Daily scrum:**
  + Team and Scrum Master can take lot of cues from this chart as an input to daily stand-up. If a team is lagging behind, then teams can:
  + Re-allocate tasks to address bottlenecks
  + Resolve impediments facing the team
  + Take expert hands on team or people who have worked on similar tasks earlier to speed-up or they taking complex stories
  + De-scope by talking to Product Owner and this should be last step, because team should explore all possibilities to adhere to sprint goals and commitment.
* **Sprint Review:**
  + The burn down chart is not useful in Sprint Review.
* **Sprint Retrospective:**
* Sprint Burndown chart act as a good input for sprint retrospective meetings. Teams can take cues from each small change in the graph to understand what really caused this?
* During such analysis, problems like “initially requirements were not clear”, or “user stories were not detailed enough” or “Sam helped team by finishing the story earlier” or “Story x was less complex then we estimated” and many more such discussions come up.
* Teams surface lot of good things and things to improve during such analysis.