M3.B1: Assignment: Homework Assignment 3: User Story

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1) **Provide an overall description of the Scrum process and roles.**

   Scrum is a framework that facilitates teamwork. Scrum encourages teams to learn through experiences, self-organize while working on a problem, and reflect on their wins and losses to continuously improve.

   The primary goal of Scrum is to meet the needs of the customer through an environment of communication transparency, collective responsibility, and continuous progress. The development process begins with a general idea of what needs to be built, followed by the creation of a list of characteristics ordered by priority (product backlog) that the product's owner desires.

   ➢ **Process:**
   a. A Product Owner orders the work for a complex problem into a Product Backlog.
   b. The Scrum Team turns a selection of the work into an Increment of value during a Sprint.
   c. The Scrum Team and its stakeholders inspect the results and adjust for the next Sprint.
   d. Repeat

   ➢ **Roles:**

   Product Owner: Represents the customers and their needs and responsible for return on investment. He gives a vision to the self-driving cars and has a final say over the product and the next releases. He manages and maintains the product backlog of desired features like to set priorities for sprint so that developers will always be working on most important features. He also decides whether to release increments to customer and he is always an active member of the scrum team.

   Development Team: It is a small, cross-functional and self-sufficient group and it is ideally located in one location.

   Scrum Master: The scrum master helps the development team to practice scrum with best practices and manages the scrum artifacts. The scrum master has no authority over the team and does not make any technical or business decision. He protects the development team from outside interference. Also manages interactions outside the team and clears any roadblocks. The scrum master minimize surprises by maximising the communication.

2) **Explain the planning process for Sprint 1. Who is involved? What are the work products? What are the roles and deliverables of each participant? Who delivers what and when?**

The Product Owner, Development Team and the Scrum master are involved in the planning process for Sprint1.

Sprint planning is divided into two parts: what and how. Sprint Preparation One focuses on selecting ready items from those offered by the Product Owner, resolving outstanding issues, and defining the Sprint Goal. Sprint Planning Two focuses on developing a work plan to get each item to 'done.' The Sprint Backlog is made up of items and plans of action or tasks.

During sprint planning, the entire Sprint 1 team decides to complete a number of product backlog items. The sprint backlog is defined by this agreement, which is based on the team's velocity or capacity and the sprint's duration. The Product Owner ensures that everyone is prepared to address the most important items on the Self Driving Cars Backlog and their relationship to the Product Goal. In order to gather feedback, the Scrum Team may invite additional people to Sprint Planning.

A Product Owner defines the specifics of the product backlog items and their associated acceptance criteria, the Entire Agile Team defines the work and effort required to meet their sprint commitment, and the Scrum Master leads the meeting. Sprint planning is a group effort.

Sprint planning covers the following topics:

The What: The product owner describes the sprint's goal as self-driving cars in this case and how the items in the backlog contribute to it. The scrum team decides what can be accomplished in the upcoming sprint and what steps they will take to accomplish it.

The How: The development team organizes the work required to meet the sprint goal. Finally, the sprint plan is a value and effort negotiation between the development team and the product owner.

The Who: Sprint planning is impossible without the product owner or the development team. The goal is defined by the product owner based on the value that they seek. The development team must comprehend how they can or cannot meet that goal. If either of these elements is missing from this event, planning the sprint becomes nearly impossible.

3) **Describe what happens, day to day, during Sprint 1. Who is involved? What are the work products?**

The first day: Sprint Planning - On the first day of the Sprint, the entire team, including the Product Owner, gathers for a Sprint Planning session. This is the very first thing that happens when the Sprint begins.

Preparation - The most important preparation is to ensure that the Product Backlog has been refined to an appropriate level of detail, with estimates and acceptance criteria. Following that, the Product Owner should have ordered the work on the Product Backlog and have a general idea of how to negotiate a valuable Sprint Goal with the team.

Day to Day - After the team has planned their Sprint Backlog, they can begin working. If they have planned things as tasks, they will work together as a team to ensure that those tasks are completed. They'll be able to monitor their progress using their task board and their Sprint Burndown of remaining work. Each team member will ensure that the Scrum Task Board and Sprint Burndown are kept up to date so that others can rely on the information. A reliable source of information should always tell the truth.

Maintain a Daily Scrum - The Development Team will meet every working day at the same time to plan what they will do to get closer to the Sprint Goal. This meeting is known as the Daily Scrum, and it should last no more than 15 minutes.

The whole team should participate. Each team member should be able to account for:

> ➢ What they did yesterday to help the team meet the Sprint Goal
> ➢ What they intend to do today to help the team meet the Sprint Goal
> ➢ Any impediments which are getting in their way

Refine the Product Backlog - Product backlog refinement in Scrum refers to the practice of giving product backlog items such as user stories more depth, organization, and estimates. The frequency is up to the Scrum Teams, but it is undeniably a good idea for them to incorporate refining into their daily routine. Refinement should not take up more than 10% of a team's total time during a Sprint. The majority of teams may find that 30 minutes per day is adequate, but others may prefer to meet for an hour or more a few times per week. Making sure the Product Backlog is updated on time will allow Sprint Planning to continue uninterrupted. The entire team, including the Product Owner, should take part.

The Final Day, hold a Sprint Review - If a team collaborated effectively, they would have worked together to achieve the Sprint Goal, managing any risks and adjusting their plans as needed. They will have demonstrated control throughout the Sprint by maintaining an even burndown of work remaining, where each member saw it as their personal responsibility to assist in the completion of work in progress. They'll have a useful increment to show the Product Owner and any invited stakeholders. A team should be looking forward to a review. A Sprint Review is also an opportunity to inspect and adapt. It's a good time for the Product Owner to explain how well the product (self-driving car) is performing, get first-hand feedback from any invited parties, and draw any lessons that can be used to improve the Product Backlog even further. If any work remains unfinished for whatever reason, it will be reviewed and re-estimated on the Product Backlog for possible inclusion in future sprints.

4) Describe what happens at the end of Sprint 1. Who is involved? What are the work products?

The development team, Product Owner, Stakeholders and Scrum Master are the only ones involved at the end of Sprint1

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Conduct a Sprint Retrospective - The Sprint Review examined the Product (self-driving car) and the value delivered, the work completed, and any work that was not completed, for whatever reason. The next step is to hold a Sprint Retrospective. A Retrospective examines the process that the team is using. Are they working as efficiently as they possibly can? It's usually best to hold the Retrospective immediately after the Review, because the former can introduce ideas for the latter to consider. Because everyone is jointly responsible for the success of the team's work, the Retrospective must be attended by the entire Development Team, the Product Owner, and the Scrum Master. It is critical to have a free and open session that gets to the heart of any issues and identifies actions that will aid in their resolution.

Product Prioritization: Before beginning a new sprint, the product owner ensures that the items at the top of the product backlog have been prioritized. According to the Oxford American Dictionary, in order to deal with the most important issues first, one must prioritize their activities, difficulties, and so on. This means that simply saying "They're all important" is insufficient for prioritizing. Another option is, as one product owner put it, "they're called requirements for a reason—they're required." There will usually be no formal ceremony to announce the prioritization. Instead, the product owner handles this independently after speaking with stakeholders to learn about their needs and preferences. Prioritization should take place as late in the sprint as possible, but it must be completed before the next sprint.

5) **How does the team measure progress?**
   During a sprint, progress can be measured in three ways:
   1) **Number of tasks to complete/completed tasks -** Tasks should be neither too large nor too small. A suitable size is one that can be completed in a single day. Measuring sprint progress based on scheduled and completed tasks is a straightforward method that provides a wealth of data.
   2) **Sum of story points to achieve/story points achieved -** The measurement criteria are the story points planned in the sprint.
   3) **Estimated open efforts -** We estimate the open effort in person days or hours and continuously adjust our estimates.

   Another method to measure Sprint Planning:

   Sprint burndown:

   To better understand the sprint's progress, a team should provide a brief overview of the sprint along with a sprint burndown chart. A sprint burndown chart keeps track of

how much work is completed during a sprint. To do so, it compares the amount of work that must be done, expressed in tale points or hours. It aids in predicting a team's ability to complete work within a specific time frame and tracks scope creep. An incorrect assessment of the amount of effort could be the cause of a burndown chart's abrupt decrease.

Definition of Done:

Everyone (Product Owner and Development Team) must agree on the definition of "Done" for a backlog item. This may be determined by what the larger organization anticipates for delivery of items.

6) **How and when can the team adjust priorities? Who sets the priorities? When can changes be made?**

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Scrum Teams usually have a "Refinement Meeting" once a sprint or once a week. When the Product Owner shares the Product Backlog Items (PBI) that need to be improved, the entire team reviews them. Following the lengthy and frequently small-scale discussion, the planning poker cards are drawn to provide an estimate to the Product Backlog Item. Without necessarily dismissing these meetings as a whole, they are not Scrum framework events, and they frequently contain a couple of dysfunctions that result in ineffective outcomes:

o In this meeting, the Product Owner takes the initiative and claims responsibility of the refinement.
o Discussions that a few senior developers are involved in.
o Endless debates that don't actually advance knowledge on the subject.
o No records of decisions are kept for future use.
o Discussions on effort are frequently held rather than discussions on acquiring additional insights because effort must be devoted to a PBI.

Once again, a problematic meeting may not exist by design. Teams must frequently come together to share insights and analyze effort in order to experimentally determine the amount of work that can be handled.

Product Backlog Refinement is the responsibility of every Scrum Team member:
1. The Product Owner should build the appropriate item.
2. The Developers should develop it correctly.
3. The Scrum Master oversees these tasks, assuring feedback and objectivity.

The first step is to recognize that product backlog refinement is not a meeting but rather a series of activities.