**SNHU Travel Sprint Review and Retrospective**

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CS 250: Software Development Lifecycle

**Introduction**

Throughout the SNHU Travel Project, we used a Scrum-Agile approach to deliver a part of the project. In this Sprint Review and Retrospective I will detail the Scrum Roles and organizational tools, and we will see how they helped us to complete user stories, handle interruptions, and communicate effectively. First, we will describe the different Scrum Roles and how they work together to accomplish a shared goal. Next, we will look at the different organization tools and their role in the software development lifecycle. Then, we will discuss how the Scrum-Agile approach allowed us to complete user stories and handle interruptions and changes. We will also look at an example of communication during the project and explain how collaboration works within the Scrum-Agile approach. Finally, we will evaluate the pros and cons of using this approach and look at some changes or additions that could be made once this approach is adopted throughout the rest of the organization.

**Scrum Roles**

Within Scrum, there are three distinct roles that work together to complete a project: the Development Team, Product Owner, and Scrum Master. The Development Team is a group of people with expertise in designing, developing, testing, and deploying software. In some cases, the team is made up of individuals that focus on specific parts of the software, while other teams are made up of generalists that work on several aspects of the software. In the SNHU Travel Project, the development team had both developers and testers that worked together to deliver a product. Testers set up test cases based on the user stories from this sprint, while developers designed and created the necessary parts of the project established for this sprint.

The Product Owner is responsible for communicating the wants and needs of various stakeholders to the Development Team. They act as a servant leader that guides the development team through the project while keeping the team from being distracted by unnecessary meetings. They use the Product Backlog to organize the stakeholders’ requirements so the team can easily identify what will deliver the most value to them. The Product Owner gathers information from the stakeholders through various means such as meetings and surveys. They then take that information and turn it into actionable requirements that are stored in the Product Backlog. The Product Owner grooms the backlog, sorting these requirements by importance. The Product Owner works with the Development Team to take those requirements and turn them into user stories. In this sprint, the Product Owner conducted a focus group to identify what users likely want from the product. They also identified that the website should focus on wellness vacations and communicated those changes to the rest of the team. By clearly communicating those changes, the team was able to find a path to implementing them, and the Product owner reorganized the Product Backlog so those new requirements could be met during the sprint.

The Scrum Master is another servant-leader role within Scrum. They organize Scrum Events so that the team can effectively communicate with each other to reach their goals. The Scrum Master’s goal is to get the team to a point where they are self-organizing. This means the development team should eventually be able to determine the best path toward a deliverable product, and the Scrum Master should provide what the team needs to reach those goals. In this sprint, the Scrum Master established a team charter and defined how the team should use the Scrum Events and Artifacts to create a working product.

**Organizational Tools**

The team used several different organizational tools during the SNHU Travel Project to communicate and collaborate. Scrum Events were organized by the Scrum Master to keep everyone on track and communicating effectively during the sprint. The first event was Sprint Planning, which is typically where user stories are chosen by the development team. The Development Team chooses some User Stories from the backlog that they believe they can complete during the sprint. During the SNHU Travel Project, the Product Owner relayed the client’s requests and findings from the focus group to the rest of the team so that they could collaborate on a plan to meet the stakeholders’ needs.

Another effective Scrum Event is the daily standup. Daily standups are meant to be primarily driven by the development team and are supposed to be about 15 minutes long at the start of the day. While not strictly necessary, an effective way to organize the standup is to have everyone identify what they accomplished the day before, what they plan to accomplish that day, and any roadblock they may be facing. Daily standups were the primary source of communication during the sprint. That is where necessary changes were identified and discussed.

Another organizational tool used throughout the sprint were the principles outlined in the Agile Manifesto. Those principles are individuals and interactions over processes and tools, working software over comprehensive documentation, customer collaboration over contract negotiation, and responding to change over following a plan. (Beck et al., 2001) We saw the first principle in how the team used Scrum Events to interact with one another without having a heavy focus on meetings, and we will see it again when discussing communication. The rest will be demonstrated in the sections to follow.

**Completing User Stories**

In previous sections, we discussed the different roles and organizational tools used by the team throughout the sprint. Here we will discuss some examples of how roles and tools were used to complete user stories. A user story is an actionable, goal-oriented statement derived from the stakeholder’s requirements. Here is a simple example from this sprint: As an end user, I want to interact with a filter to set a price limit on the top five destinations list, so that I can see popular locations that fit within my budget. The person that benefits from the story is identified, along with the action they perform using the software to achieve some goal. .Each of the roles within the team performed different actions to facilitate the whole team reaching the user story goals of the sprint. The Scrum Master organized the team and established how Scrum Events should play out. The Product Owner interacted with stakeholders to identify their needs and communicated those needs using the product backlog and user stories. Here, the principle of customer collaboration was highlighted by the Product Owner setting up a focus group to identify the needs of the customer. The development team took the user stories and identified what needed to be done to meet the needs of the customer. Developers worked with existing code to add images to a Top Five Destination list in the code. Testers took user stories and turned them into test cases to ensure that the software accomplishes the goals set out in the user stories. Each of the people filling these roles had to communicate with each other to get to that end product. Here we see the principles of individuals and interactions and working software at work. While the Scrum Events and Artifacts were useful tools to the team, they were used and created to reach a goal rather than acting as meetings and documentation for the sake of themselves.

**Handling Interruptions**

One of the biggest benefits of Agile is its flexibility. In this sprint, we saw some great examples of this flexibility. During development, the team switched from a basic list to a slideshow for the top five destinations list. In our situation, the tester had to update their test cases to facilitate this change. Because of the fluidity of Agile, the team is able to make these types of changes by reorganizing the product backlog, which would not really be possible with a waterfall approach.

In the next example, the Product Owner identified that it would be beneficial if the vacation software focused on health and wellness vacation types. They communicated this necessary change to the rest of the team where they all discussed how this would impact the sprint. They were able to keep the same deadline by having the Product Owner reprioritize some of the other user stories. The tester adjusted the test cases to accommodate the changes, and the developers identified how these changes would affect the development process.

In both of these examples, we see the Agile principles of individuals and interactions over processes and tools and responding to change over following a plan. We can see that plans are not always set in stone within the Scrum-Agile approach. The team communicated with each other to identify how these changes would impact development, and they identified what actions would need to be taken to facilitate those changes.

**Communication**

In a Scrum-Agile approach, communication is supposed to be focused around face-to-face interactions whenever possible, whether that is within the team or with stakeholders outside the organization. Within the team, this communication happens through Scrum Events or even simple, short conversations. Communication with stakeholders can be anything from meetings to focus groups. Digital communication is still a useful tool when that face-to-face interaction isn’t possible. Below is an example of an email to the Product Owner and Tester as a developer followed by an email from a tester to the product owner:

Dear Product Owner and Tester,

When we added the new wellness slideshow to the page, Tester noticed that the vacation type filter was no longer working. Considering that we are now focusing on wellness/detox travel, I was wondering if the vacation type filter is necessary anymore. I could remove that filter and keep the location and price filters, or I can come up with a more granular list to focus on different types of wellness vacations, like yoga or wilderness retreats. If we go with the second option, I can come up with a list to give to Tester to make sure that we implement it correctly.

Thank you,

Donovan

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| Dear Product Owner,  I had some questions about how the slide show is going to be implemented once it is in production, and how they affect the User Stories that I’m working on. My primary question, as it affects most test cases, is will the slide show have its own webpage, or will it be featured as a carousel on the main SNHU Travel page? These are the user stories that I’m working on currently and the questions I have about them.  **User Story 3 - Vacation list price limit set by user**  Where is the price limit drop down supposed to appear on the page?  Should the price limits be cached so that they remain if the user resets the page?  If the price limits restrict the number of available vacations below 5 items, will it display vacations outside of the range, or will it be limited to vacations within those bounds?  **User Story 2 – Filter to include vacation types**  Will this filter be in the same drop down as the price limit filter?  Should the filters be cached so that they remain if the user resets the page?  If there are less than 5 available vacations after the filters are set, will it display vacations outside of the filters, or will they be limited to vacations that fit the restrictions?  How are both filter types supposed to function if the user accesses the webpage from their phone? Will it be in a similar location or function differently in any way?  **User Story 6 – User profile creation and customization**  Are there other things that should happen when someone creates an account? Will they receive an email, text-message, or something to that effect?  Thank you for your time,  Donovan |

In these examples, the emails are relatively short, and the amount of fluff is limited. Most questions are accompanied by higher level potential solutions related to the questions. It is important to show the other person that you put some thought into resolving these problems and that you respect their time and input. In the first example, I included the tester in the email because the issue pertained to the work they were doing. It would not make sense to have separate email chains for the same issue, and everyone involved can be on the same page this way. Most of these questions would likely be asked during a Scrum Event depending on when the issues arise, as it is better to keep the whole team on the same page and face-to-face communication should be the priority.

**Evaluating the Agile Process**

Throughout this review we have seen how the different Scrum Roles and Organizational Tools were used to successfully complete the sprint. Each individual team member focused on their role in order to contribute to the end goal of producing working software. The Scrum Master organized the team, the Product Owner delivered stakeholders’ requirements through the Product Backlog, and the Development Team worked together to produce the software outlined in the user stories. The team used Scrum Events to organize their communication and focused on the Agile Principles to maintain the flow of the process.

There were not many downsides present during this sprint. The whole team should have been involved in the creation of the team charter rather than having the Scrum Master create it on their own. Some of the email communications would have been better suited for a daily standup to keep the whole team in the loop. In the future, I think it would be beneficial to use project management and communication tools like Jira and Slack to maintain organization and communication within the team.

Overall, I would say that the Scrum-Agile approach was successful in this situation. The team was able to deliver working software. One of the highlights of this approach was the ability to adapt to requirement changes that would not be possible in a waterfall approach. There are steps that should be taken as this approach is disseminated throughout the organization, such as focusing more on face-to-face communication and incorporating other organizational tools to improve the workflow.

**Reference**

Beck, K., et al. (2001) The Agile Manifesto. Agile Alliance. http://agilemanifesto.org/