**6** **7-1 Final project submission**

Achna Hettiarachchi

Department of Computer Science, Southern New Hampshire University

CS 250: Software Development Lifecycle

Arthur McWain

April 16, 2023

**7-1 final project submission**

At the end of each Sprint or incremental release, it is customary for the Scrum Master to organize a Sprint Review and Retrospective. I will assume the role of the Scrum Master and create a comprehensive report that summarizes, analyzes, and concludes the work that was completed during the course of the development.

**Applying Roles**

The product owner (PO) was mainly responsible for acquiring the needs of the customers, managing and prioritizing the product backlog, and converting product managers' plans to workable tasks. The product owner must extract information from the stakeholders (customers, sponsors, decision-making parties in the organization, etc.) so that it can be delivered to the scrum team. So, PO first categorized stakeholders based on interest and power and hence decided how to deal with each stakeholder. PO kept them informed about the next stage of the project that involved them and took their input into the Backlog. Then I will make effective decisions by prioritizing the right task at the right time. The ability to convince, behave patiently, use positive language, communicate clearly, and take responsibility will be essential in engaging with users or stakeholders productively.

The scrum master (SM) is the leader of the scrum team who is responsible for ensuring that the team is progressing toward the end goal efficiently. Also, the SM is the link between the product owner and the scrum team and hence must have sound communication skills. As the SM of the project, I must plan to execute the various Scrum events, such as Sprint Planning, Daily Scrums, Backlog Refinement, Sprint Review, and Sprint Retrospective. In sprint planning meetings with the product owner (and maybe the agile team) I went over the backlogs and analyzed the capacity of team members to allocate tasks. We discussed any issues/feedback regarding the previous sprint and updates to the project to prepare for the next sprint. Then in daily scrum meetings with the developers, I monitored the meeting to ensure that each team member is clear about what he/she did the previous day, what to do next, and any issues that they had. At the same time, I guaranteed that everyone was present, punctual, and completed the meeting within 15 minutes. In backlog refinement meetings I helped the Scrum Team evaluate the user stories and get ready for the next sprint.

Testers had to create and deliver feedback on test status, test progress, and product quality. They obtained feedback from the necessary parties including the product owner continuously to guarantee the quality and accuracy of the test process.

Developers had to work in a fast-changing environment where the quality of the product is appreciated more than just writing some code to meet the project schedule. Unlike in the waterfall method where developers are isolated, in the agile process, they had to continually interact with team members and work iteratively to develop sustainable software. Developers analyzed the user stories and test cases to understand how the coding must be done. They discussed any updates to the user stories with the PO and if there were any uncertainties regarding the test cases, they talked to the tester.

**Completing User Stories**

User stories uncover customer experiences and needs. For example, customers want features that filter vacation packages based on price limits, vacation type, personal profile, etc. These create a transparent communication channel between the product owner, users, and the development team. User stories generate immediate practical targets for the development team and force them gradually to build a useful product that meets the requirements brought up by users. The Scrum-agile approach is an iterative software development practice that divides the SDLC into sprints to deliver working product increments. The Scrum team collaborates to meet customer needs, using the product backlog to select high-priority user stories and outline tasks. Daily scrum meetings are held to ensure progress and identify and resolve obstacles. The scrum master facilitates the team and eliminates impediments. Sprint review and retrospective meetings are held at the end of each sprint to gather feedback and improve the process. Hence, the scrum events (Sprint planning, daily scrum, Sprint Review, Sprint retrospective, and Sprint) helped each of the user stories come to completion.

**Handling Interruptions**

Flexibility and adaptiveness derived through the iterative and incremental nature of the scrum-agile approach guarantee project completion even when a project is interrupted. For example, when the focus of the destinations was changed to the detox/wellness travels, the scrum team adapted by using the product backlog to prioritize new user stories that align with the new requirements. We reorganized the backlog and planned the next sprint based on the new priorities. During the sprint, the team focused on developing new features that align with the new project goals and delivering a working product increment that aligns with the new direction. The Scrum team continued to hold daily Scrum meetings to ensure progress and identify areas for improvement.

**Communication**

Agile teams adopt different forms of communication (verbal, written, visual, collaborative, etc.) to guarantee that the entire team is aligned with the project tasks. As the Scrum Master, I emphasized the importance of effective communication within our team. The communication practice that we mainly adopted in the SNHU Travel project was verbal communication, in fact, face-to-face meetings. This included video conferences and phone calls too. To facilitate this, I advised team members to send an email briefly describing their concerns when they needed to hold a meeting. Face-to-face meetings helped the team to clarify any issues right away and make quick decisions establishing project efficiency. See the Appendix for sample email communications by a tester and a developer.

**Organizational Tools**

We utilized JIRA to help coordinate and increase efficiency within the team. Jira helped us administer the backlog by creating, prioritizing, and organizing tasks into user stories. We planned sprints via Jira by creating a sprint backlog and outlining sprint goals. It has scrum boards that offered a handy platform to track progress during a sprint. By customizing the Scrum board to fit the team's workflow we were able to easily see any holdups and dependencies. The real-time reporting feature tracked progress, identified issues, and lead to informed decisions. In short, JIRA was a productive tool that helped to keep the entire team involved.

**Evaluating Agile Process**

We struggled at the beginning as the team had no experience with the agile method. It was difficult to predict exactly when the SNHU travel project will be completed or what the outcome will look like. However, the agile method is highly flexible, which allowed us to adjust our approach as needed throughout the project. I.e., we could adapt to changing requirements or shifting priorities easily when we decided to change our focus to detox/wellness travels. The iterative nature of Scrum helped us deliver working software more quickly. Scrum promoted collaboration, which lead to better team dynamics. Making progress visible to all stakeholders, facilitating better communication and decision-making, scrum established transparency. We continuously improved until we achieve new project goals. In general, the agile method can be highly effective for software development teams, but it demands a certain level of proficiency, discipline, and flexibility.

**Appendix**

Tester trying to clarify an issue related to a user story:

To: Product owner and Scrum Master

Subject: user story clarification

Dear PO and SM,

I am working on writing test cases for three selected user stories for our travel SNHU project. While developing the test cases I found that I needed more information to write more relevant test steps for those test cases. I would like to meet you to clarify the following so that I can develop more applicable test cases to determine whether the product will pass or fail.

User story #1

* What kinds of information regarding the previous trips that the user needs to include in his profile (e.g., destination, number of travelers, etc.)
* What kind of preferences that the user needs to include in his profile (e.g., special needs, preferred vacation type, etc.)

User story #3

* What are the destination types that we are going to include in our list?
* Do you have a specific requirement on where/how that filter appears on the website?

User story #5

* What are the price ranges that we should include in our list on the website?
* Do you have a specific requirement on where/how that filter appears on the website?

Thank you,

Tester

A developer trying to clarify issues related to a recent project change:

To: Product Owner, Scrum master, and Tester

Subject: project update clarification

Dear PO, SM, and Tester,

As per the meeting that we had earlier today, I understand that we are going to focus on detox/wellness destinations in our travel SNHU project. This means I have to alter the destinations that we have picked already in the previous week. I would like to have the updated user stories and the new test cases to ensure that the changes I make match the new project requirements. I have listed some specifics that I'm looking forward to.

* Are there specific types of detox/wellness locations that we are interested in? For example, spa treatments, ayurvedic treatments, relaxing with nature, hiking, fitness, etc.
* Are we also going to include other destinations along with the detox/wellness destinations?
* Are we going to add any new items to the user profile to match this new requirement?
* What does the market research say about the keywords used when customers search for wellness/detox destinations?

I'm looking forward to this the above clarifications and any revisions as soon as possible to start working on the new changes, please. I'm willing to participate in an additional meeting with the product owner and the tester to discuss these new changes in detail if necessary.

Thank you,

Developer

**References**

Hettiarachchi, A. (2023). CS 250 T4160 Software Development Lifecycle 23EW4 Assignments. *SNHU.*