**7-1 Final Project: Sprint Review and Retrospective**

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The SNHU travel project has proven to be an excellent way to become familiar with the different roles and responsibilities of a Scrum-agile team. Being able to perform the duties of each role was helpful itself, but reflecting on the experiences of being in each role through journal entries was incredibly insightful. While we learned that a Scrum-agile approach is not always ideal depending on the size of the corporation and the nature of the project, the SNHU Travel project was a perfect fit for a Scrum-agile approach. The development of the project allowed us to experience first-hand how each role contributes to the success of the project, how a Scrum-agile team aids the completion of user stories, and how a Scrum-agile structure helps to adapt to change during a project. We also observed how such a team communicates between members as well as the organizational tools that the team utilizes.

The various roles taken on by the members of the Scrum-agile team contributed to the success of the SNHU Travel project by fulfilling their own duties, which in turn helped the other roles to fulfill their duties. The work completed by each role is necessary for the next step to be completed on that work by a member of another role, so each role’s responsibilities directly provide a basis for other roles to work off of. For example, the Product Owner completes a product backlog. This Product Owner then creates user stories from the backlog. After these stories are completed, they are presented to the testers who then create test cases for each user story. The testers then work with the developers to develop the parts of the software that must be completed during that particular sprint. The Scrum Master acts as a peer-leader during all of this, removing any impediments that may slow or halt the progression of the team's work. This synchronicity within the Scrum-agile team is a large reason as to why such a team is successful; each member’s contribution helps the other members to contribute their portion to the project.

Utilizing a Scrum-agile approach during the software development lifecycle of the SNHU Travel project allowed user stories to be completed in a smooth and collaborative way. First, the Product Owner developed the product backlog from which the user stories were then created. Next, the tester took these user stories and created test cases from them. These test cases were then used by the development team to bring the user stories to completion within the software. These steps were made seamless and easy through a Scrum-agile approach because of the emphasis on frequent and clear communication. For example, additional clarification was requested by the tester on the user stories at a certain point, which was communicated via email. The tester outlined which aspects of each user story required clarification rather than asking general questions, so the response would be exactly the input necessary for the tester to complete their duties. Without a Scrum-agile approach, such communication may not be possible, or the response given may not have been as detailed as it needed to be. However, the emphasis on clear communication and teamwork that is apparent in a Scrum-agile approach allowed for this clarification to be given quickly and appropriately, helping drive the user stories to completion.

During the completion of the SNHU Travel project, there was an interruption and change of plans that needed to be addressed. Specifically, the Product Owner requested that the website should center around wellness vacations rather than the original plan of popular destinations. To face this change, the team conferred together to address the new requirements and how they would be faced. A Scrum-agile approach thrives in these scenarios as the methodology is well-suited to adapt to change, hence being “agile”. A simple meeting and a small change to the software was all that was needed to address this change. With a Waterfall approach, the entire plan may have to be shifted, along with alterations to the project budget and maybe even the project deadline. Using a Scrum-agile approach, however, the team dealt with such a change by simply not defining a rigid plan and budgeting and just communicating clearly and early. This is one of the aspects that makes a Scrum-agile approach so powerful in the right situation.

There were multiple instances throughout the development of the SNHU Travel project where communication between the team was necessary. One example of this communication is the following portion of a sample email sent to the Product Owner and tester after the changing of requirements that made the project center around wellness getaways:

**Product Owner** - Could you please send me and the Product Tester the changes that are needed within the existing program in the form of a bulleted list of requirements? Having the information available in this fashion helps immensely in implementing the new requirements into the existing program.

**Product Tester** – Upon receiving the mentioned requirements via email, could you please start work on updating your test cases at your earliest convenience? I will be amending the program in the meantime and the sooner we are both finished, the sooner we can reach our definition on “done”.

This piece of communication was effective because it was directed specifically at the two members of the team to whom it pertained, rather than mentioning such information in a meeting between the whole team. Another example of effective communication is in another sample email that follows:

Dear Product Owner,

Thank you for submitting your user stories for the SNHU Travel project. I am currently developing test cases from the user stories and implementing pass / fail measures to determine the integrity of the product. I was hoping you may be able to answer a question that I have about one of the user stories so that I may better test the product.

**User Story One:** Was the creation of a user profile explicitly stated by the client, or did they use the term “user profile” casually, without suggesting it be intentionally created?

This example of communication was effective for the same reason as the previous, it addressed the appropriate team member and asked specific questions to gain the information needed. The first email encouraged collaboration among team members because it was from the developer and addressed to both the Product Owner and the tester, and mentioned that upon response to the email, the tester and developer could meet their definition of “done”. The second email was from the point of view of the tester, and it encouraged collaboration by prompting a response from the Product Owner that would then allow the tester to continue developing test cases.

The Scrum principles and organizational tools that allowed the development of the SNHU Travel project to thrive were the emphasis on communication and collaboration, being flexible, and iterative development. As stated in the previous paragraph, there were several instances where communication was necessary among the team to ensure that all team members’ duties were fulfilled satisfactorily. Being part of a Scrum team is what allowed for this collaboration, as a more traditional approach would have made this communication harder. Flexibility of the team allowed the Scrum team to adapt to the changing requirements that were presented when the website changed its focus to wellness vacations. Had the plan and budget been more rigidly structured around the original requirements, adaptation would have been more of a problem. However, the flexibility of the Scrum team made such a change a very easy process to accommodate. Finally, iterative development was a large part of the project’s success. Each new phase allowed for another step to be taken towards developing the product, and through journal entries, we were able to reflect on each part of the cycle. This practice allowed us to perform better during each new phase because of our reflection on each previous phase, seeing what worked and what did not, and what could be improved.

Taking a Scrum-agile approach throughout the software development lifecycle of the SNHU Travel project was an excellent choice. During the development of the project, the team faced challenges in the form of unclear information and changing requirements. These challenges exposed both pros and cons of a Scrum-agile approach. One downside is that, had a Waterfall approach been used, the requirements for the project would have been more clearly defined, avoiding the issue of changing requirements. However, if this change had come as a surprise when using such a method, it would have seriously affected the development of the project. Because of the Scrum-agile approach that we used, it was very simple to communicate amongst the team and adapt to the change without affecting the project’s budget or deadline. Because of this approach, it was also very easy to communicate when clarification of requirements was needed. In the case of the SNHU Travel project, a Scrum-agile approach was the prefect approach to take. The project was successfully completed without budget adjustments, the team worked together to meet the client's needs, and the project was completed on time.