CS 250 Final Project

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CS 250: Software Development Lifecycle

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Applying Roles

In an agile team, every role is vital for the success of various projects. They all have different responsibilities and duties, but they are all equally important. In the SNHU travel project, the product owner was the one who created the product vision. By meeting with users and creating user stories the PO determines what is important in a project. For example, in the SNHU travel project, the PO identified that users want a list of the top destinations that are personalized. Users did not want to see trips they would not be interested in. These user stories and their priority are used by the developers to complete projects promptly and complete the most important work first. The scrum master helps facilitate cooperation and removes roadblocks. They not only ensure that the team is working together but are doing so effectively. In the example video from module two, the scrum master kept the team from going off-topic in the daily scrum. The scrum master also helps the team by removing roadblocks. In the example video, the scrum master gets new window blinds so the team can better see their screens.

The developers and testers of a team play quite a different role than the PO and scrum master, but they are just as important. The developers are the people working on the project, and much of their success comes from a growth mindset and continuous improvement. They are also prioritizing tasks based on what the product owner says or puts in the backlog, not what they think they should be working on. This works very well because the PO is the one who understands what the project needs to be and is the one speaking with users, shareholders, and other members of the company. In the SNHU travel project, the developers followed the product owner's lead and made the changes that were asked of them. Specifically changing the theme of the trips to detox and wellness. By abstracting speaking with the user from the developers they can focus on creating high-quality code/projects. By using user stories iteratively, the work is

very adaptable. Testers play a less visible role in the team, but it is a particularly important one. They ensure that the developers do not make serious mistakes. They are the ones who ensure the project does what it is supposed to do based on the acceptance criteria. They identify bugs and other issues and ensure the project is effective/efficient. A great benefit of testers is that by identifying problems early in a project their effect is significantly reduced. Allowing for faster development time and reduced costs.

Completing User Stories

A scrum-agile approach to the software development lifecycle (SDLC) helps user stories get completed by breaking them down into small manageable tasks or in agile sprints. By breaking down larger projects into small pieces not only is it significantly more manageable but it is easier to define what is "complete or finished." A scrum-agile approach encourages each team member to fill their role. For example, in the SNHU travel project, a user story was to create the customized top five list. The PO defined and prioritized the user story, the developer completed it, and the tester ensured that the developers fulfilled the acceptance criteria. All while the scrum master is ensuring that the team is working together, and roadblocks are solved. With a scrum-agile approach, user stories are treated like mini projects helping to break down larger ones into incremental parts.

Handling Interruptions

One of the greatest benefits of a scrum-agile approach is its adaptability. In software development where users often do not know exactly what they want a project to be, adaptability is essential. In the SNHU travel project halfway through the project, it was decided that the trips would be themed toward detox and wellness. Having constant communication from things like the daily scrum allows for solutions and problems to change to be handled promptly. It also keeps everyone in the loop of what is going on. In the SNHU travel project, the PO got everyone

together and communicated the changes right away. Because agile projects are built incrementally it is easy to accommodate changes like this. At the end of each sprint, the team can take some time and change the direction of the project if needed at a sprint review. The PO updates the backlog and changes the priority of tasks or updates existing user stories. Also, at a sprint review, the team can learn and reflect on how to handle changes in the future.

Communication

In agile effective communication is imperative. In module five I was playing the role of the developer to make the changes given by the PO. However, I needed the tester to ensure that the work I did met the acceptance criteria x, y, and z. Here is a sample from the example email: "Can you review the slideshow and ensure that it passes test cases x and y? As well as edge case z?" Here I was specific about what acceptance criteria I needed to check and what I was working on. This helps to reduce unnecessary back-and-forth communication. Being clear also helps build trust and allows team members to be on the same page. Also, in that email, I asked the PO about changing the background color from blue to white so the text would be easier to read. Here is the sample from the email "While changing the slideshow to the detox and wellness theme, the trip title and description is hard to read. It is currently in blue, and I believe a white background would look better. If you want to keep blue, I can try and change the text color. But I wanted to ask you before I made this change." Developers need to ask before making a specific change because they may not communicate with the users directly. There may be a reason that the background was blue and changing the text color to something to fit the blue background may have been more fitting. The communication here was fitting and relevant to the changes that I made. And by being clear it reduces back and forth communication.

Organizational Tools

Many agile tools and principles can help a team be successful. In the SNHU travel project, we used a product backlog to organize user stories. The product backlog helps the PO determine what is the priority of the project. It helps developers know what the project's priorities are and what work needs to be done. During the SNHU travel project, we highlighted the agile principle of adaptability. When the PO asked the team to change the theme of the trips to detox and wellness the project was already in progress. By using the product backlog, user stories can be rearranged by the PO, so it is easier to add or change priorities. This keeps the team focused on what matters even when things change constantly. This is why doing regular backlog refinements is important. We also used the daily scrum or meetings to discuss progress and any problems the team had. This was especially useful because some team members had some concerns about the shift in trip themes. Both the daily scrum and product backlog emphasize agile transparency.

Evaluating Agile Process

Agile had many benefits for the SNHU travel project, however, it also had a few drawbacks. Due to the nature of the project changes were bound to happen. Halfway through the project when the company decided to shift the theme it was extremely easy for the team to shift the project thanks to Agile. By using user stories and a product backlog it was easy to keep track of the work that needs to be done and the purpose of what each task or item is for. By completing the project incrementally, the stakeholders were able to see progress over time. This allows them to provide feedback as the project is being worked on, not when it is completed. The stakeholders decided that they wanted a slide show for the top five list instead of just a webpage. If the project had been a waterfall, it would have been harder to add the slideshow. Or it would have taken longer to do so because the feedback was not given until the end. Most importantly agile focuses on communication which allows the team to talk about changes, problems, and solutions. Over time this supports a culture of accountability, transparency, and collaboration.

While agile had many benefits for the SNHU travel project it did have some downsides. While agile is very adaptable, making many changes can significantly impact the cost or amount of time a project will take. While the change to the theme was not large. A more momentous change made halfway through a project can cause many problems. Making many changes can cause the project to extend its deadline or become something more than the project was originally designed to be. The project is also very dependent on the product owner. If they are not actively engaging with stakeholders and team members the project will suffer greatly. However, the PO for the SNHU travel project did an excellent job. Overall, a scrum-agile approach to the SNHU travel project was the ideal choice. The team had a good PO, and many changes made throughout the project were small, so the project was not at risk.