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**Final Project Retrospective**

**CS 250 SNHU**

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For the SNHU Travel project, the Scrum Agile method was used to make the project efficient and productive. There are various roles of Scrum that were important to the overall team. The first role was the Scrum Master. Scrum Master oversaw applying the rules and schedules for the scrum of the team. Setting up meetings and making transitions to agile methods is easy for the team to understand. The meetings get everyone on the same page and layout the work needed to be done and how to address any issues. The Scrum Master works with the product owner to know what changes are needed and how to incorporate them into the agile method production of the project, for example with the SNHU Travel project.

The next role is the product owner, this role is important to know what the client needs and relay that back to the team. These requirements made by the clients are what determine the development of the project and the issues that can be fixed later in the development. For these requirements, the client’s needs are noted and made into user stories to determine the priorities.

As for the rest of the team, it is composed of around 9 people, consisting of developers, and testers. Testers are a common role that most of the team members can take on for when it is needed. The testers analyze the project noting what needs improvement and working with developers to provide the support for the project development. The testers use the user stories to provide the information needed for development to change the project and fix any issues, as well as the needs of the clients.

The next role is developer an essential role for the scrum team. The developers take the requirements sent in by the clients and deliver them, adding them to the project to further the development to the needs of the clients. The developers take all the information from the testers and product owners to shape the development in the way it needs to be adapted for the needs of the client. The developers work with the testers to complete each task needed to allow the testers to further their testing and user stories to keep the momentum of the project to have smooth development. The developers benefit the most in the agile method, having instant responses to the issues needed to be fixed which makes production quick and effective. For example, having emails sent between the developers and testers from the product owner, to change the way the slides worked for the SNHU travel project, which included the rehab vacation changes. These were quickly received by the testers and developers from the product owner and used to implement into the project.

If the project was ever changed or halted for specific reasons an agile approach was necessary to keep the teams on track. For example, when the client’s asked for rehab vacations to be implemented into the SNHU Travel project. The product owner received the information and relayed it to the Scrum Master and the developers to tell them what the client needed. The Scrum Master set up the meetings and provided the layout the product owner wanted, and the developers had a clear path laid out on how to achieve these sudden changes. These are quick and only possible with the agile method, if the waterfall method were used it would have taken much longer and made more roadblocks for the developers to handle.

When it comes to team communication, it is one of the most important aspects needed for the best production possible. Having the communication for changes or for further development is what makes a product that the clients are satisfied with. The examples of communication we used were for one, emails. Having emails consistently between the product owners and developers themselves lets the developers get the client's needs from the product owner as well as allowing them to ask the product owners specifics on what exactly the clients want for the project. Another example was weekly to daily scrum meetings, these meetings laid out the foundation or what was needed and the information between the product owners and testers/developers. Everyone was on the same page and knew what was needed and what could be done. And if any issues arose, they could be brought up at these meetings and planned accordingly to be fixed.

For the SNHU Travel project one of the biggest principles was collaboration. Collaboration was important for all the team members to work together and develop the project simultaneously. An effective tool for this is GitHub. GitHub allows the team to make the project and collaborate. Having a central GitHub project for all the team to access and see is essential as it allows development instantly and multiple departments to work at the same time. Any issues with one part of the project can be sent to another part of the team and resolved quickly using this principle and this effective tool. This can also coincide with the scrum meetings and events, bringing up the GitHub project and various parts at the meetings.

For every project methodology there are pros and cons to it. For agile method there are various pros as well as some cons. Pros for agile method are a very adaptable development, simultaneous feedback, and freedom in development. The project can be adapted quickly with the agile method, having a source of need from the clients through the product owner allows the changes to be made to satisfy those needs in a timely fashion. Simultaneous feedback is important as the product owner can have constant needs from the clients and relay them to the team, these can then be developed, tested, and brought back to the clients to see what else needs to be done. Lastly, freedom in development is a big part of what makes the development team work so well. There is much feedback for them to work with and be able to try diverse ways to achieve what the client wants, having emails and meetings allows them to see the plan out and develop accordingly, giving more time to implement than focus on deadlines. There are a few cons for the agile method, however. One con is the clients themselves, if the client does not provide enough feedback or does not put much effort into the project then the agile method starts to crumble without the information needed to develop it efficiently. Another con is if one or more developers of the team leave or cannot work on the project. The teams needed to be set in stone and solid as having less team members can be devastating to the agile method, given the less communication for development.

But overall, the agile method was indeed the best approach for the SNHU project. It allowed much communication between the client and the team developing. There were many meetings and emails to confirm what needs were wanted and how to implement them. With the waterfall method, the project would not have adapted to the changes and taken longer to achieve.