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CS 250: Software Development Lifecycle

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# Sprint Review and Retrospective

The SNHU Travel project presented several unique challenges throughout the course of its development cycle. Implementation of agile methodologies and common Scrum practices helped to foster collaboration and iterative innovation. This flexible model served as an adaptable framework that allowed for tasks and team members to act more efficiently and cohesively. Teamwork was paramount for the success of this project and when coupled with teams taking ownership of their roles and responsibilities the agile methodology helped to foster successful implementation as well as meeting deadline periods.

The product owner helped to lead the charge in this transition to an agile methodology. This was seen by their initial success in creating a product backlog. The main responsibility of this team member was continual pruning and grooming of the backlog. This helps to ensure deadlines are met, product features are implemented, and teams clearly understand their assigned duties. With this duty in mine visual aids were employed to define assigned tasks very clearly on a user story board. This allowed for the product backlog to be effectively tracked by offering bite-sized chunks of tasks that could be grouped by priority, deadline, subject matter, and weighted by difficulty or cost to implement. This task focused upon a concept of delivering just good enough by clearly defining user stories in a short but descriptive format that clearly outlined the goals of each story. The scrum master worked in tandem with the product owner to ensure the product backlog was maintained in an efficient manner as well as assisting in the delegation of tasks among team members. This review and structured assignment were achieved through the use of reviews, meetings, and daily/weekly stand-ups. During such meetings team members were engaged in an open-communicative manner to facilitate the identification of barriers related to deadlines or product implementation. These meetings offered a chance for the team members to quickly present their successes and struggles with their currently assigned user stories, thus allowing for open communication and facilitating cross collaboration by informing all parties involved on feature implementation. This helps when dealing with cross-team collaboration as it can offer quick insights into user stories or epics that can be better served through the extra effort and costs associated with delegating time and resources towards collaboration. The compartmentalization of tasks and cycle of daily and weekly reviews helped all parties involved within the development cycle to quickly ascertain user story completion and overall product progress.

The development cycle of the SNHU Travel project provided some valuable insight into the minds of testers and developers when working with an agile approach. Testers serve as the last barrier to implementation and product completion. The importance of their role cannot be understated. By redefining and clarifying user stories testers are able to create better encompassing test cases more easily. These meticulous test cases ensure project requirements have been met while also facilitating ease-of-use for the end user by identifying bugs or mistakes so they can be rectified before final product launch. This demonstrates a direct example of one of the major benefits of an agile approach over the waterfall method by demonstrating the capacity to continually adapt and refine product features over the course of the development cycle. This is a luxury afforded due to the concise nature of user stories and the direct ownership by various teams of their stories or larger epics. This piecemeal implemented approach is driven by the idea of delivering on much smaller features along the way towards final product deployment, which allows flexibility, time, and innovation when innovative ideas or refinements are identified. With this project specifically the tester identified several areas requiring further clarification and spoke with the product owner through email to better ensure test cases were broad enough to facilitate the implementation of code that met all required product features. In a similar vein, developers within an agile approach often collaborate or refine their own work as the result of findings from the tester executing their test cases. The developers approached this project with an object-oriented approach. This, when coupled with agile methodologies allowed for even more adaptability and easier implementation, as well as offering a luxury on saving costs and time if changes needed to be made to prior submitted code. Developers throughout the scope of the development cycle identified barriers relating to the implementation of new code impacting or needing requiring changes to prior feature implementation. This demonstrated just how important the flexible nature of an agile approach is. By being able to identify these barriers and make the necessary changes to better serve stakeholders and end users the development team demonstrated how their direct application of agile methodologies delivered a more comprehensive final product.

The user stories for this project proved quite challenging for the team to integrate and complete. This is because new findings and innovations often led to the realization that refinement of user stories was necessary. Thankfully, the agile methodology was fully supported by all parties involved in the project. By effectively having the whole team buy in to the agile approach the adaptable nature better served innovation by facilitating changes to these bite-sized chunks of feature implementation. Initially, the user stories and test cases were not meticulous enough. Thankfully, agile methodologies help developers frame their work in a bug-free manner with the mindset of allowing an easier transition between the cross-team collaboration required by the testers executing their extensive test cases. The ability to redefine project requirements as the development cycle proceeded was just one of the many benefits that an agile approach offered for this project.

The team used email to quickly seek clarification on barriers or project requirements along the way. In the case of the developers and testers this was demonstrated through their use of emails seeking to clarify deadlines, user story refinements, and additional work due to retroactive changes required to features within the product backlog. Thankfully, the product owner and scrum master made use of weekly sprint review, daily standups, and continual monitoring and pruning of the product backlog and user story board to quickly delegate, brainstorm, and refine product features and user stories, as necessary. These standups and team meetings served as an open line of direct communication and offered unique opportunities for brainstorming, identification of barriers, and immediate feedback on daily/weekly work and progress for all parties involved.

The team employed the use of the information radiator to remarkable success during the course of this development cycle. This approach in a broad sense made use of physical boards and displays to quickly convey meaningful progress and job assignments at a quick glance to the team. This allowed for feature implementation, product completion, and deadline to project delivery to all be quickly identified from informative visual displays. Similarly to this the Jira software suite was incorporated to provide remote and electronic access to similar boards and timelines. This software solution allowed remote team members and stakeholders to stay informed despite not always being as physically present as the rest of the developmental team. This demonstrated the importance of using a hybrid approach when incorporating any agile approach.

This travel project demonstrated the need for a unified and adaptable approach to deliver upon our customer promise. The agile methodologies employed afforded the team the luxuries of iterative implementation which allowed for innovation and refinement of product features throughout the product lifecycle. In addition, the visual boards such as the user story board offered an invaluable tool to quickly measure direct progress and targeted deadlines. This information was presented within an open-door manner allowing all parties involved to directly communicate, offer feedback, brainstorm, and innovate the necessary changes required at various stages throughout product deployment. The major downsides to this agile approach would stem from the initial time to set up the methods employed, the cost of physically implementing these changes, and the difficulty in ensuring cross-collaboration and individuals buying wholeheartedly in to the agile approach. Without the team cohesion and direct ownership from our team members these negatives could have been compounded and made implementation of an agile approach more difficult. Thankfully, the flexible and adaptable environment provided by the agile methodologies used during the course of this project far outweighed any negative impacts. Being able to refine old features as new innovations or barriers came to fruition was paramount to ensuring customer satisfaction and better delivery of necessary product features. This agile approach was a learning process for the team, but it has only served to add another set of methods to the developmental toolbox. For these reasons, this agile methodological approach was indeed the more encompassing and better fitting approach for this project.