CS-250 Software Development Lifecycle

CS-250 Final project

Southern New Hampshire University

John K. Barden

***The agile team consists of a Scrum Master, product owner, testers, and developers. These members have a dedicated role in the agile team and are essential for efficient workflow. Agile method is a short sprint or phase developing features for the product owner. The agile method has multiple phases, and each member has a critical role throughout the phases. These are usually short and focused on a singular feature. Having a short development cycle allows continuous changes and testing throughout. Agile method is the bases of a project management program which allows flexibility to accommodate the team's need. With this flexibility, there have been multiple methods like scrum, Kanban, and extreme programming stemming from the base agile method. Working within the agile method during the development of the SNHU Travel project helped the development process.***

***The product owner focuses on managing the product backlog. The product backlogs are the features that can be completed within a sprint. They also gather information from user stories to implement additional features. They help guide the development process to incorporate requested features and any major changes to the program. The product owner gathered user stories and developed a manageable sprint to implement the additional features for the SNHU travel project. During a major change during the development, the product owner stated the necessary changes and the project's final goal.***

***A scrum master is a servant leader, they facilitate the team and protect them from development impediments. They uphold the agile method and help assist the team’s growth and value. They have limited interaction with the actual development team as the team should be self-sufficient, but if the team needs assistance the Scrum Master is there to assist. They are there to understand the team composition and help further the team's growth. They are there to find additional techniques to further increase the team's efficiency. During the development of the SNHU Travel project they held the morning SCRUM meeting. During this meeting, any roadblocks or issues that came up the Scrum Master helps resolve those issues. The Scrum Master helped assist the team and improve their efficiency.***

***Testers are there to verify the program's functionality and any bugs that need to be addressed. They are a single entity who tests the developing features of the development team. The tester should not be seen as a specialist but should be capable of both development and testing. While the development team creates features the tester is to verify all aspects of the feature pass in a potentially shippable state. During the SNHU Travel project's development, the tester created pass or fail tests required for the features to be developed. The tester needs to have some idea on the intended use and function of the feature. Continuous testing of the SNHU Travel project features allows any programming issues and bugs to be addressed early. Instead of after development step like in the waterfall method***

***The final agile member is the development team, they are a self-sufficient group who can perform any task required. They follow the rules set by the Scrum Master and complete features set for the current sprint. The team should help each other and grow to become more efficient coders. They also try to become a more organized developer with various software development practices. The development team efficiency developed features for the SNHU Travel project. Having assistance from all the other team members allows them to develop more features more effectively.***

***The product owner is the one to gather information from user stories during the SNHU Travel project and develop a sprint to complete those requests with the assistance of the Scrum Master. With the information gathered and features set, the tester can develop a pass or fail for the feature and test when development is complete. The development team can then delegate the tasks and complete the features during that sprint. With everyone following their roles the time to complete a feature to an acceptable shippable state is quick.***

***If there is a required change in development which is major it can be started during the next sprint, which is usually within a week. With short development cycles changes can be started quickly. During the SNHU Travel project there was a requirement to shift from general vacation spots to detox and relaxation spots. This was easily implemented in the next cycle, rather than at the end of development like the waterfall development if there was a change required.***

***During the development of SNHU Travel project the whiteboard communication method was followed. This is where all information is set into one central location and anyone at any time can review the information. This allowed those one different schedules and time zone to have access and communicate without dedicated time.***

***Some methods and communication programs that would help the SNHU Travel project that follow the agile method. Using Azure board is an excellent choice for an organization tool to keep everyone on Track. It has an organized UI and is easy to use to help facilitate new implementation. Here are a couple agile principles that should be followed during the SNHU Travel project. Through the continuous development that the agile method has, customer satisfaction should be top priority, the software is made for the customer. With this if the customer wants a major change, the short sprints should be able to facilitate that change. The short sprints should be designed to allow quick development. Lastly all members should consider their workflow and see for any way for improvement. This continuous improvement in efficiency helps develop an excellent agile team.***

***The agile method helped keep everything focused with a focused guideline. Keeping everyone on track and working on something helps develop features quickly. Short stories with adequate information, Daily meeting to address issues, testers constantly testing features and a self-sufficient development team improved the SNHU Travel project development. With a major change near the end of development the agile method facilitated that change. With the waterfall method the project would need to be restarted from the beginning. This is a major upside of the agile method compared to the waterfall method. If there was a single focus with no changes the waterfall method could be better, but with continues changes through user stories agile method is superior.***