**Software Development Life Cycle**

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During the last 7 weeks of development at ChadaTech we have successfully implemented many new features into SNHU Travel, it is ChadaTech’s hope that these new features will expand the client base and provide the clients with new tools to browse vacation packages. This retrospective evaluates the agile methodologies and highlights the contributions of different Scrum roles, the efficiency of user story completion, communication strategies, handling project interruptions, and tools and software that contributed to the success of the team. We will assess the efficacy of Agile versus waterfall and ultimately conclude that Agile was the best method for this project.

During the development of SNHU travel the Scrum-Agile team worked together and played crucial roles to ensure SNHU Travel’s project was a success. The Product Owner helped facilitate communication, providing clear requirements and prioritizing the backlog to ensure the team was working on high-value features. The product owner reviewed new features with the rest of the team and discussed the pros and cons of this sprint. When features needed to be changed within SNHU Travel the product owner met with the team to discuss these changes. The creation of user stories will help humanize the project and allow the rest of the team to create the project with the user in mind.

The Developers completed the user stories and translated them into code. They participated in sprint plannings and retrospectives. They were able to deliver quality code and keep the project on track. The testers working closely with developers ensured the code delivered what the end users wanted and that all implementations of new features would work flawlessly and behave as intended.

As Scrum Master my role was to facilitate communication within the team to keep the sprint moving in a positive direction. I implemented daily stand-up meetings allowing everyone to bring up concerns or obstacles that they encountered or communicate success. Jira was utilized to electronically keep track of feature progress and helped keep the team on track to complete the sprint.

When user stories were first presented to the team, the varying stories were given a priority number. This gave the development team a starting point and ensured that the highest priority tasks were developed first. This helped the developer team by being able to gauge how long something would take and would allow them to plan accordingly in the day-by-day cycle of the work. The team was able to complete these tasks thanks to the Agile approach and when changes were deemed necessary, they were able to facilitate these changes with minimum setback.

During the development cycle there was an interruption when the product owner notified us that ChadaTech wanted to pivot from a top five destinations to a more exact top five being narrowed down to just top five wellness vacations. New user stories were developed and clarifying questions were answered so the team had a new but clear goal. Thanks to the flexibility within the Agile method these changes were easily implemented, minimum time was lost, and the project stayed on track.

As the Scrum Master communication is my primary job. I would utilize the daily stand ups so that the team could voice concerns or communicate accomplishments. These stand-ups also kept the team on track. Utilizing an information radiator was a quick and effective way to give the team information on how the project was progressing. Giving easily readable visual clues helped keep the team aligned and motivated and gave the chance for more experienced developers to help peers if they were struggling. Communication with emails were also utilized to ask more accurate and clarifying questions about the user stories and what the clients wanted for their program. This helped ensure everyone on the team was aligned with the clients’ goals and could develop a quality program that fits into the desires of the clients.

There are positives and negatives to the Agile methodology in software development. Agile encourages communication, and self-actualization. By breaking complex components of a program into more manageable smaller parts this gives the team clear goals and allows the project to make changes, if necessary, like the top 5 wellness change. This allows the team to remain flexible and gives small but deliverable progress updates. This helps the team align resources to certain tasks and gives the team a sense of self-ownership. The negatives of agile is that communication is paramount to the success of any project using the Agile method. This heavily depends on the team being familiar with agile processes and having soft skills. This may lead to teams falling behind or being unable to adapt, especially if communication is difficult to achieve such as remote teams or if the team lacks the soft skills that Agile requires. However, if a team does have soft skills and becomes a homogenous group this is where agile shines as the team becomes self-regulating and self-efficient this causes the team to essentially run itself on information that the Scrum Master presents.

The agile approach I do believe was the best approach given the nature of the SNHU Travel project. The travel site requested many different features and breaking these features up into priorities helped not overwhelm the team. They were able to get immediate feedback following the implementation of features which ensured quality and kept the team from running into program breaking bugs. This kept the team up to high standards and on track to complete the project. When a change was required, the team was able to quickly respond and react and deliver the changes requested quickly. This was helped by having the high priority target completed and only simple changes needed to be made. Feedback was provided because smaller sections of the project were able to be submitted in a timely fashion and well before delivery day. If we had used the waterfall method the changes requested could have caused significant delays. One specific example was the top 5 vacation destinations, initially the top 5 were displayed on one page in a list format but in subsequent weeks it was revealed that a slideshow should be used for this feature. Using the waterfall method this information may either not reach the developers or would have caused significant delays as this feature would have to be rewritten in the intended way. Instead of giving the team the opportunity to start redevelopment only where the project needed helped keep the momentum moving forward and ensured a high-quality product was delivered.