8-2 Journal: Portfolio Item

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Portfolio Item

1. **Demonstrate how the various roles on your Scrum-agile Team specifically contributed to the success of the SNHU Travel project.** Be sure to use specific examples from your experiences.
2. Product Owner (Christy) provided direction to the team on what needed to be built while prioritizing the work to be done. Christy helped to maximize the value of the product and the work of the development team.
3. Scrum Master (Ron) helped ensure effective Product Backlog management and helped the Development Team create high-value products. Another duty provided by Ron was to remove challenges that could slow the development team’s progress. Ron created an agile team charter; facilitated Scrum events, such as Sprint Planning, Daily Scrum, Sprint Review, Retrospective, and Backlog Refinement.
4. Developer (Nicole) designed and developed code according to solid software engineering practices and participated in peer reviews, being sure to collaborate with the team to produce just enough design so there was room for iteration.
5. Tester (Brian)defined acceptance criteria and acceptance tests, clarifying any ambiguity found in the code and user stories. Brian executed testing and analyzed results while being sure to collaborate with the team to resolve issues and defects.

As the Product Owner for the SNHU Travel booking software, Christy created a focus group consisting of some of SNHU Travels’ best customers. As the Product Owner, it was important for Christy to listen, ask questions, identify problems, and help create solutions. Christy listened to each person’s (Nick, Maria, Brent) feedback, then shared the results with the client and the President of SNHU Travel client (Amanda). Christy asked Amanda similar questions, trying to identify the problem and help create a solution. Finally, Christy used the information to write a simple, clearly defined user story, which she then shared with the other Scrum Team members, Scrum Master (Ron), developer (Nicole), and tester (Brian).

1. **Describe how a Scrum-agile approach to the SDLC helped each of the user stories come to completion.** Be sure to use specific examples from your experiences.
2. A Software Development Life Cycle (SDLC) is a project management model that defines different required stages to bring a project from its initial idea to deployment and later maintenance (Preston, n.d.). The seven primary stages of SDLC are planning, analysis, design, development, testing, implementation, and maintenance.

In the video Ron (Scrum Master), has many responsibilities (i.e., ensuring effective Product Backlog management, helping the development team to create high-value products, removing challenges slowing the development team’s progress, and facilitating Scrum events) (SNHU, n.d.). Amanda (client) explains to Ron (Scrum Master) the details of what SNHU Travel would like done to the travel site (i.e. expand their presence, offer trendy, niche vacation packages, and gain a larger audience within the United States) (SNHU, n.d.). The Scrum Master restates the clients’ goal of creating a trendy, niche vacation booking system (SNHU, n.d.). To begin the Scrum Master assembled an agile team including a tester, developer, and Product Owner, already established to be Christy (SNHU, n.d.). The next step for the Scrum Master and Scrum team was to create an agile team charter and schedule the Scrum event (i.e. Sprint Planning, Daily Scrum, Sprint Review, Retrospective, and Backlog Refinement) (SNHU, n.d.). The Scrum Master helps to facilitate the Daily Scrum by immediately assembling an agile team to plan database structure, develop an Entity Relationship Diagram (ERD), produce just enough design so there is room to iterate, define acceptance criteria and acceptance tests, and create a test database using data sample from the online database (SNHU, n.d.). Because the timeframe for completion is short, only five weeks, the Scrum Master will set up Daily Scrum meetings, as well as weekly Preliminary Design Reviews. The first preliminary design review will begin immediately (7/7/2022), where the team will work on creating a plan database structure, develop Entity Relationship Diagram (ERD), produce just enough design so there is room to iterate, define acceptance criteria and acceptance tests, and create test database using data sample from the online database. The second review will take place on (7/14/2022), allowing the team to review updates made to the project based on the outcome of the initial design review. The Scrum Master will then schedule the expected completion date meeting for the Scrum team to test the product for bugs and ease of use/user experience (Ux). Execute testing and analyze results, and collaborate with the team to resolve issues and defects. The Scrum Master will schedule a “customer review” meeting on (7/28/2022), scheduling a demonstration for the customer to determine if the product is on track with their requirements. The remaining time will be spent responding to requirement changes and final testing, before the final deliverable. At the end of the five weeks (8/11/2022) the Product Owner, Scrum Master, and the Scrum Team will deliver a finalized product to the customer.

As the Product Owner for the SNHU’s Travel booking software, Christy has created a focus group, consisting of some of the SNHU’s Travels’ best customers, who have recently purchased niche vacation packages through competitors. Christy has gathered the group to get their input on new products and booking tools—as users of travel sites the Product Owner would like the users’ opinions on what they would like to see by way of updated tools and offerings. The three members of the focus group, Nick, Maria, and Brent offered several ideas:

* Nick would like to see top destinations listed just for him; he would also like to add his favorite travel choices to his profile.
* Maria would like to see the top 5 or 10 destinations listed; she would also like the top 10 destinations customized to places to which she enjoys traveling; Maria would also like to have a set price limit, and see the top destinations base on price or see the hot deals listed based on her profile.
* Brent would like the list customized for him, based on his previous travel profile; he would like to be able to choose the type of vacation he wants.

After meeting with the focus group, Christy identified at least five user requirements, based on her interaction with the users. In an agile environment, the Product Owner is directly responsible for defining and communicating the users or stakeholders’ requirements to the developers, this is done in the form of user stories (Cobb, 2015). Individual stories within the Product Backlog should be clear and concise, defining the requirements in an easy flow—the story should be written in simple English, making it easier for the development team to read, understand and implement (Cobb, 2015). Agile encourages the defining requirements to be broken into “small, bite-sized chunks” allowing that the developing functionality is clearly defined and “can be completed within one sprint” (Cobb, 2015). These small, bite-sized chunks or “individual work items” provide the team with a way of estimating and tracking the work that needs to be done; as the design progresses the story in the Product Backlog is updated (Cobb, 2015). User stories normally follow the “role-feature-benefit pattern” (Digite, 2022):

* As a(n) <type of user>
* I want to <perform some task>
* So that I can <achieve some goal>

User stories center on the needs of the user and what needs to be added to or changed in a software product, embodying the first principle behind the Agile Manifesto: “Our highest priority is to satisfy the customer through early and continuous delivery of valuable software” (Agile Manifesto Values and Principles, n.d).

After identifying the user requirements based on the user interaction, Christy then identified the user requirements as large, medium, or small and prioritized them according to the user needs. The requirements were then placed in the Product Backlog, with the highest priority item first on the list and the lowest priority item at the end. A detailed user story was then written for each request.

On our Scrum team, Tester (Brian’s) role goes beyond testing for bugs. Brian’s key responsibility as tester is to work closely with the Product Owner (Christy), to ensure that the test cases evaluate the needs outlined in the user stories. Identifying ambiguity in the user stories and developing scenarios to meet the acceptance criteria helps ensure that the development team will deliver the desired product. The tests that are developed could become part of the acceptance criteria for a story, or possibly another story in the Product Backlog. Brian began by developing a detailed test case for each of the three user stories, this includes, a descriptive name for each user story, identifying detailed steps that will need to be taken by the user to complete the action identified in the user story, and indicating a clear pass/fail measure for each step. Often, when developing test cases, the tester needs to contact the Product Owner for more information or clarification. Brian, send an email to Product Owner (Christy) requesting user story clarification.

1. **Describe how a Scrum-agile approach supported project completion when the project was interrupted and changed direction.** Be sure to use specific examples from your experiences.
2. During the course of development of the new software for SNHU Travel, the client requested a requirement change. It was up to the Product Owner (Christy) to re-prioritize the Product Backlog, so that the team would now focus on the adjusted features deemed most important for the SNHU Travel project. Christy would break down the new features in user stories deemed “ready to work” by the team. This ensured that each team member understood the new features and the team’s adjusted priorities. As the Product Owner, Christy relays the new changes to the team, adding that the changes need to be made within the specified time frame of five weeks. This new change falls on Developer (Nicole) to ensure that the changes can be implemented on time. After reviewing the Product Backlog, Nicole emailed both the Product Owner and the Tester for clarification on the user stories, before beginning any type of modifications. Within the email, Nicole inquired if extra time and people would be allotted for the training of the product, for creating training guides and/or user documentation. She also wanted to know if the client would use the same people who participated in the original forum to test the product, providing a customer’s perspective. Because of the changes, Nicole worried that it would not be realistic to expect the product to be delivered on the original schedule and budget given the substantial number of changes, and wonder if the revised product require additional time and or budget, is there a contingency plan to cover it. Her finally question was for Tester (Brian), asking him to explain what kind of impact the changes would have on test plans, resources, and schedule. As the Developer for the project, an immediate response was necessary, in order for the team to continue the development of the new requirements and modifications.
3. **Demonstrate your ability to communicate effectively with your team by providing samples of your communication.** Be sure to explain why your examples were effective in their context and how they encouraged collaboration among team members.
4. To demonstrate my ability to communicate effectively with the team, I used email correspondence to effectively relate my requirements and level urgency.

The first example was sent from Tester (Brian) to the Product Owner (Christy), requesting user story clarification:

CS 250 Module Four Tester Email

From: Richard (Brian) Tester

To: Christy (Product Owner)

Subject: User Story Clarifications

Dear Christy,

I have looked over your user stories and will start on the development of the test cases for the different aspects to determine whether the product passes or fails. To continue with the development, testing, and implementation stage, I will need additional metrics to get a clearer idea of the test cases. I need your input on the following questions.

User Story One

* Can the customized profile be turned on or off?
* Can we set the time range for the display history?
* Can the attributes list be customized? For example, the number of travelers included within the trip, age group, and any additional accommodations?

User Story Two

* How do we determine the user’s scope of interests?
* What kinds of column headers would you like to see for this option (i.e., vacation type, honeymoon package, and family or group packages--trip name, location, prices, description)?
* Should we add another attribute called “other”?
* Should the destination descriptions be only one-liners or would you like more comprehensive details?

User Story Three

* Do you have a display preference for these destinations? For example, slide show versus external link in new browser tabs.
* Can the list be sorted in descending or ascending prices?

In addition to the above user stories, I have included some thoughts that might be helpful within the website:

* A link for group travel providing multiple destinations at a lower price point than traveling alone.
* A link for personally identifiable information (PII) or credit information.
* A yes/no check box would allow the user to choose how their personal information is shared.
* A section for customer feedback, which includes other travelers’ perspectives on chosen destination, providing a five-star rating.
* A traveler’s forum where users can connect and share travel ideas, best restaurants, tourist attractions, and more.

Regards,

Richard (Brian)

The second example was sent from Developer (Nicole) to the Product Owner (Christy) and Tester (Brian), requesting information on deriving requirements.

CS 250 Module Five Developer Email

From: Richard (Nicole) Developer

To: Christy (Product Owner) and Brian (Tester)

Subject: Deriving Requirements

Dear Christy (Product Owner) and Brian (Tester):

I have looked over the Product Backlog and will start the development of the new requirements and modifications. Per our last Scrum Team meeting, my understanding is that we will keep the same timeline, and tasks will be reprioritized within the Product Backlog—with our main focus now shifting to the new booking tool “detox/wellness travel”.

I will need some clarifications before beginning any type of modifications:

* Will extra time and people be allotted for the training of the product, for creating training guides and/or user documentation?
* Will the client use the same people who participated in the original forum to test the product, providing a customer’s perspective? Product testing will help the development team to identify any bugs and/or non-compliances and to make sure all requirements made by the client have been met, from a customer usability standpoint.
* Do you fell that it is realistic to expect the product to be delivered on the original schedule and budget given the substantial number of changes.
* Should the revised product require additional time and or budget, is there a contingency plan to cover it?
* Please explain what kind of impact this will have on your test plans, resources, and schedule.

To continue the development to include the new requirements and modifications, I will need additional metrics to get a clearer idea of the test cases. I need your input on the previous questions.

Regards,

Richard (Nicole)

1. **Evaluate the organizational tools and Scrum-agile principles that helped your team be successful.** Be sure to reference the Scrum events in relation to the effectiveness of the tools.
2. The Scrum value is about commitment and focus, openness, respect, courage, and communication; the Scrum Alliance Code of Ethics states the “willingness to dedicate ourselves to a goal and to do our best to meet that goal” (Cobb, 2015). The Daily Scrum is held each day of a Sprint, with each meeting held at the same time and the same location each day. Before the meeting, a list of updates and tasks will be listed on the Kanban board, for all team members to review. Attendance for Daily Scrum meetings is required, which means both the Product Owner and Scrum Master, committed members of the team, are also expected to attend and participate (Cohn, nod). Daily Scrum meetings focus on what each person has accomplished the day before and what they will accomplish today (Cohn, n.d.). These meetings offer team building, allowing each Scrum team member to distribute information; it’s a time for helping each team member gain an understanding of what work has been completed and what work still needs to be accomplished (Cohn, n.d.). The Daily Scrum allows team members to make commitments to themselves and one another. In Module two’s reading, *Resources: Scrum Framework and Scrum Master Role, TidBIT*, Scrum Master, Todd Lankford, explains how the events of the Daily Scrum can open up “opportunities for the team to collaborate and take more ownership of their work” (SNHU, n.d.). Lankford notes, “Scrum performed right means high engagement” and “high engagement means you have vigor, dedication, and absorption in your work” (SNHU, n.d.). During the Daily Scrum, each team member is asked the same questions, which the team member will answer, then the next person, this continues until each team member has answered (Cohn, n.d.). Alternatively, some teams prefer to talk through one Product Backlog item before moving on to the next, allowing individuals to give an update multiple times during the same meeting (Cohn, n.d.).

I feel information radiator is the one communication tool that allows for more openness and transparency within the Scrum Team. Two values in the agile environment are openness and transparency, each helping to "build stronger and more efficient teamwork" (Cobb, 2015). Communication is an essential part of working together. Working together by listening, helping, and supporting close collaboration among the team, especially for those not working within the same area, is essential for good communication (Cobb, 2015). In the agile environment, information radiator is a big visual display placed in a conspicuous location visualized by a constant flow of traffic (Cotton, n.d.). Information radiator can be in the form of a large board or take up an entire wall of a room, allowing each team member to see the accomplishments made by fellow workers and how essential their contributions are to the goal set by the team (Cobb, 2015). The large display allows others outside the team to be aware of progress made and of issues that might hinder it; this is consistent with encouraging "a spirit of partnership and customer collaboration" (Cobb, 2015). This type of communication tool makes for an easy flow of information (Cobb, 2015). Each team member can update their project status in real-time and it is collected within the information radiator to be shared with others both inside and outside the project team—streamlining the role the project manager plays in aggregating and reporting project status and information (Cobb, 2015).

1. **Assess the effectiveness of the Scrum-agile approach for the SNHU Travel project.** Be sure to address each of the following:
   1. Describe the pros and cons that the Scrum-agile approach presented during the project.
      1. Halfway through the Sprint, the client discussed making changes to the product. This would include Five Top Wellness Retreat Destinations, with a completion date of five weeks. The expected deliver date stayed the same. Agile methodology worked for this project because the agile approach offers flexibility and is adaptable. Scrum meetings took place each day at the same time and place. Each team member answered the same three questions. The answers varied between individuals, but each explained what they had accomplished the day before and what they hoped to accomplish today. Within the agile environment, teams work together, with team meetings and Sprint reviews that last between two to four weeks. During the Sprint, the user can also review the product, adding their concerns or suggestion, which exemplifies what, happened with the client of SNHU Travel. Concurrent testing is part of the Agile testing practice. The Tester can begin testing the software as soon as it is sufficiently complete for testing, allows for more concurrency of development and testing, helping to avoid any last-minute surprises at the end of the Sprint (Cobb, 2015). Another advantage to Agile is the developer/client relationship; engaging the client in the testing and design phase ensures the production of a welcomed product that meets the client’s needs (Cobb, 2015).

The advantage to agile methodology is that it is structured in such a way that it breaks the complex task down into several small Sprints, as such it is more adaptable to changes made after the kickoff. The disadvantage that may occur is a lack of due diligence on the clients part to have a realistic idea of the project requirements.

* 1. Determine whether or not a Scrum-agile approach was the best approach for the SNHU Travel development project.

1. If given a choice between Waterfall and Agile, I believe we would continue using the agile method to work with SNHU Travel or any other organization seeking our assistance. Agile offers a flexible and adaptable approach, which allows priorities and requirements easy adjustment throughout the project. Another advantage to Agile is the developer/client relationship; engaging the client in the testing and design phase ensures the production of a welcomed product that meets the client needs (Cobb, 2015). Through the process, we took advantage of iterations or sprints, allowing the Development/Tester Teams to find and resolve problems early instead of waiting until product completion. This more adaptive approach has a primary advantage over Waterfall, where less time is needed to define the detailed requirements (Cobb, 2015).

Works Cited

Agile Manifesto Values and Principles. (n.d.). *Agile Manifesto Values and principles*. Retrieved July 17, 2022, from https://resources.scrumalliance.org/Article/key-values-principles-agile-manifesto

Cobb, Charles G. (2015). The Project Manager’s Guide to Mastering Agile : Principles and

Practices for an Adaptive Approach. Wiley.

Cohn, M. (n.d.). *The daily scrum meeting*. Mountain Goat Software. Retrieved July 9, 2022,

from https://www.mountaingoatsoftware.com/agile/scrum/meetings/daily-scrum

Cotton, T. (n.d.). *How to make an effective information radiator*. LeanDog. Retrieved August 6, 2022, from https://www.leandog.com/blog/how-to-make-an-effective-information-radiator

Digite. (2022, May 25). *User stories: What they are and why and how to use them*. Retrieved July 17, 2022, from https://www.digite.com/agile/user-stories/

SNHU. (n.d.). *CS 250 Software Development Lifecycle.* CS250-module two: Initial client

meeting. Retrieved July 9, 2022, from http://snhu-media.snhu.edu/files/course\_repository/undergraduate/cs/cs250/storyline/mod2/story\_html5.html