**CS 250 Final Project**

**CS-250 Software Development Lifecycle**

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**Sprint Review and Retrospective Document**

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**Introduction**

**This document serves as the Sprint Review and Retrospective for the SNHU Travel application development project. Our team successfully piloted the Scrum-Agile methodology, transitioning from a traditional waterfall model. This retrospective reflects on our experiences, successes, challenges, and lessons learned during the project, as documented in our Scrum Master, Product Owner, Product Tester, and Product Developer journals.**

**Applying Roles**

**Product Owner (Week 1):**

**As the Product Owner, I focused on direct user engagement to uncover real needs. For example, through user interviews, we identified the need for price filtering, leading to the user story, "As a budget traveler, I want to be able to filter search results by price so that I can easily find the cheapest options." This user engagement helped prioritize valuable features.**

**Scrum Master (Week 2):**

**As the Scrum Master, I facilitated daily stand-ups, ensuring open communication and removing impediments. For example, when a team member struggled with a database connection, I helped connect them with a subject matter expert. I also ensured that the daily scrums were time boxed to 15 minutes and used the question format provided.**

**Development Team (Weeks 3-4):**

**As a Product Developer, I focused on adapting to changing requirements through clear communication with the Product Owner and Tester. For example, when the "Personalized Recommendations" feature was updated, I sent an email requesting clarification on selection criteria, specifications, and design guidelines, as well as discussing testing implications with the Tester. This proactive approach ensured efficient development and testing.**

**Quality Assurance (Week 5):**

**As the Product Tester, I focused on creating test cases based on user stories but also sought clarification from the Product Owner. For example, when testing the "Personalized Destinations" feature, I requested specific criteria for personalization, budget filtering, and data sources, as highlighted in my email. This ensured comprehensive testing and addressed potential ambiguities.**

**Completing User Stories**

**The Scrum-Agile approach facilitated the completion of user stories through iterative development and continuous feedback. We adhered to the sprint planning process, by defining sprint goals, and planning the sprint work. The interviews and user meetings were absolutely crucial in writing effective user stories. Communication with the Product Owner and Tester was also essential to the product testing and developing. For example, the user story "As a user, I want to view a list of top destinations" was broken down into smaller tasks, completed in sprints, and reviewed regularly. This approach allowed for quick adjustments and ensured the user stories met the acceptance criteria. Effective communication was essential in this process.**

**Handling Interruptions**

**During Sprint 2, SNHU Travel requested a last-minute change to integrate a new format for our site. As my journal (January 26, 2024) emphasizes, we adapted the plan. We reprioritized the backlog, incorporated the change into the current sprint, and adjusted the sprint scope. This adaptability is a key strength of Agile.**

**Communication**

* **Daily Stand-ups: Brief 15-minute time-boxed events ensured everyone was aligned on progress, challenges, and upcoming tasks. Using the question format facilitated quick problem-solving and maintained team cohesion.**
* **Sprint Reviews: Time-boxed events allowed for stakeholder feedback and ensured the product met their expectations. Demonstrating working software at the end of each sprint generated valuable feedback.**
* **Team Messaging: Using a dedicated communication tool, we maintained constant contact. This allowed for quick issue resolution and knowledge sharing.**
* **User Meetings/Interviews: Direct engagement with users and stakeholders was crucial. These meetings provided the context and details needed to craft effective user stories and ensure the product met user needs.**
* **Product Owner Communication: Clear and consistent communication with the Product Owner was crucial for effective testing. Regular communication, clarification of user stories, and timely feedback on test cases were essential.**
* **Tester Communication: Early and frequent communication with the Tester was vital for discussing testing implications and ensuring testability. Collaboration on test cases and timely feedback were also crucial.**
* **Information Radiators: Tools like Kanban boards and burn-down charts were invaluable for providing a shared view of project progress and fostering transparency.**
* **Scrum Events: Each Scrum event served a distinct communication purpose, ensuring everyone was aligned.**

**Organizational Tools**

* **Jira: Facilitated backlog management, sprint planning, and task tracking. It provided a transparent view of project progress and allowed for effective sprint management.**
* **Daily Stand-ups: These meetings allowed for the daily inspection and adaptation of the sprint plan, ensuring we stayed on track toward the sprint goal.**
* **Sprint Planning: Allowed the team to create a sprint goal, and then plan the sprint work needed to accomplish that goal.**
* **Sprint Reviews: Allowed the team to show the stakeholders the working software, and receive feedback to update the product backlog.**
* **Sprint Retrospectives: Allowed the team to inspect and adapt the processes used during the sprint, and to create action items for future sprints.**
* **Product Backlog Refinement: Consistent refinement is key to the process.**
* **User Interviews/Surveys: Essential for gathering user feedback and ensuring the product was user-centered.**
* **Refinement Meetings: Dedicated refinement meetings with the Product Owner and development team were valuable for clarifying user stories and ensuring comprehensive testing.**
* **Azure Boards: Acted as a central hub for project information, facilitating task management, workflow visualization, reporting, and collaboration.**

**Evaluating Agile Process**

**Pros:**

* **Increased flexibility and adaptability.**
* **Improved communication and collaboration.**
* **Faster time to market.**
* **Higher customer satisfaction.**

**Cons:**

* **Potential for scope creep.**
* **Requires strong team commitment and self-organization.**
* **Can be challenging to estimate effort and time.**

**For the SNHU Travel project, the Scrum-Agile approach was highly effective. The project's dynamic requirements and the need for rapid feedback made Agile a superior choice compared to a rigid waterfall model.**

**Resources**

Schwaber, K., & Sutherland, J. (2020). The Scrum Guide. Scrum Guides. <https://scrumguides.org/>

What is Scrum? (n.d.). Scrum.org. <https://www.scrum.org/learning-series/what-is-scrum/>

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USWDS: The United States Web Design System. (n.d.). U.S. Web Design System (USWDS). <https://designsystem.digital.gov/>