### **Sprint Review and Retrospective**

#### **Applying Roles**

The success of the SNHU Travel application development project was significantly influenced by the distinct roles within the Scrum-Agile Team. Each role contributed uniquely to achieving the project objectives:

* **Scrum Master:** As the Scrum Master, I facilitated the smooth operation of the team by organizing Scrum ceremonies such as Daily Standups, Sprint Planning, and Sprint Retrospectives. For example, during the Sprint Planning session, I ensured that the team correctly prioritized user stories, focusing on features that were crucial for the application’s MVP. Additionally, I worked to resolve blockers, such as delays caused by external API dependencies, by coordinating with external teams.
* **Product Owner:** The Product Owner’s role was critical in maintaining the product backlog and ensuring that the team understood the client’s requirements. By consistently refining the backlog, the Product Owner ensured that the highest-priority user stories were clear and actionable. For example, the Product Owner gathered feedback from stakeholders during Sprint Reviews and adjusted user story priorities to align with business objectives, such as emphasizing the package deals feature.
* **Development Team:** The developers worked collaboratively to design, code, and test features. For example, during the second sprint, the developers successfully implemented the flight search feature by coordinating efforts and leveraging pair programming to resolve complex issues. Their use of test-driven development (TDD) ensured the reliability of the codebase and minimized bugs in production.

#### **Completing User Stories**

The Scrum-Agile approach was instrumental in completing user stories effectively. Breaking the project into sprints allowed the team to focus on incremental progress. For instance, the user story "As a customer, I want to search for flights by destination and date" was addressed in Sprint 2. During the sprint, the team conducted a backlog refinement session to ensure clear acceptance criteria. Daily Standups allowed the team to identify and address blockers, such as issues with the API integration for flight data.

By the end of the sprint, the feature was delivered and demonstrated to stakeholders, who provided immediate feedback. This iterative process ensured that the feature met the client’s expectations and allowed for adjustments before final implementation. The incremental delivery of features also reduced risks by identifying issues early, such as misaligned user interface designs, which were quickly adjusted based on stakeholder input.

#### **Handling Interruptions**

The Scrum-Agile framework proved its flexibility when the project’s direction shifted mid-development. Initially, the team planned to develop a hotel booking feature in Sprint 3, but the client requested prioritization of a package deals feature. The team quickly adjusted by re-prioritizing the backlog during a Sprint Review session. This session provided clarity on the revised requirements and ensured that the new priorities were well-understood by all team members.

This adaptability ensured that the client’s new requirements were met without delaying the project timeline. By maintaining a clear and updated backlog, the team effectively pivoted to address the change while maintaining productivity. The Scrum principle of continuous delivery of value ensured that each sprint delivered features aligned with the evolving needs of the client.

#### **Communication**

Effective communication was a cornerstone of the project’s success. For example, during Daily Standups, team members shared their progress, challenges, and plans, ensuring alignment across the team. One specific instance involved a developer highlighting a delay caused by an API bug. This issue was escalated during the Standup and resolved collaboratively within a day, minimizing its impact on the sprint timeline.

Another example of effective communication was the use of a shared collaboration tool like Jira, which allowed all team members to track the status of tasks and user stories. This transparency encouraged accountability and streamlined discussions during Sprint Reviews and Retrospectives. Additionally, the team utilized Slack for real-time communication, which was particularly useful for quick problem-solving, such as addressing a miscommunication about acceptance criteria for the package deals feature.

#### **Organizational Tools**

Several organizational tools and Scrum principles contributed to the team’s success:

* **Jira:** Jira was used to manage the product backlog, plan sprints, and track progress. For example, the team’s burndown chart provided real-time visibility into sprint progress, helping to identify and address potential delays. Jira’s ability to link user stories with subtasks ensured a clear breakdown of responsibilities.
* **Scrum Events:** The structured cadence of Scrum events—including Sprint Planning, Daily Standups, and Sprint Reviews—fostered a rhythm that kept the team focused and organized. For instance, the Sprint Retrospectives enabled the team to reflect on what went well and identify areas for improvement, such as better test automation. The use of Sprint Reviews provided a platform for stakeholder feedback, ensuring alignment with client expectations.
* **Version Control Tools:** The team used Git for version control, enabling efficient collaboration and code integration. Pull requests were reviewed collaboratively, ensuring code quality and adherence to standards.

#### **Evaluating Agile Process**

The Scrum-Agile approach offered both advantages and challenges during the SNHU Travel project:

* **Pros:**
  + Flexibility to adapt to changing requirements, as demonstrated by the pivot to prioritize package deals.
  + Incremental delivery of features allowed for continuous feedback and improvement.
  + Enhanced collaboration and communication among team members.
  + Stakeholder engagement was high, leading to features that aligned closely with business goals.
* **Cons:**
  + The team initially struggled with estimating story points accurately, leading to minor scope adjustments mid-sprint.
  + The iterative process required continuous stakeholder engagement, which occasionally delayed decision-making.

While the Scrum-Agile approach presented some challenges, it was ultimately the best approach for this project. The ability to respond to changes and deliver high-quality features incrementally aligned well with the dynamic needs of the SNHU Travel application. The iterative nature of Agile ensured that stakeholder feedback was incorporated promptly, minimizing risks and improving the final product.

#### **References**

* Beck, K. (2017). *Extreme Programming Explained: Embrace Change*. Addison-Wesley.
* Schwaber, K., & Sutherland, J. (2020). *The Scrum Guide*. Scrum.org.
* Layton, M. C., & Ostermiller, S. J. (2020). *Agile Project Management for Dummies*. Wiley.