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The Scrum-agile team comprises a scrum master, a Product Owner, developers, and QA.

The scrum master facilitated team collaboration, led the task to remove any impediments, and assisted the team with prioritizing the product backlog. The Scrum master ensured that the team followed agile principles. Scrum master focuses on aligning the team with the sprint goal. Scrum masters have scheduled various scrum events such as daily scrum meetings, sprint planning, sprint reviews, and sprint retrospectives.

Product Owner's responsibilities include key stakeholders and end-user engagement to elicit requirements. PO has prepared product documentation, including the product vision, market strategy, team roles, and a high-level roadmap to reach the goal.

The Product Owner supports user story mapping. It is a technique to visually organize and prioritize user stories based on the product roadmap. PO has ensured that product backlog is prioritized per SNHU's business requirements.

The developers and testers were responsible for designing the code and creating test cases based on the user stories. The developers were paired with QA to test the functionality of each code component effectively. For the SNHU travel project, the development team delivered incremental online booking system features.

During the SNHU Travel project development, the PO scheduled the requirements gathering sessions with key stakeholders, including SNHU Travel's existing customers.

The PO created user stories out of the requirements. User stories are stakeholders' or clients' requirements. User requirements are formatted into user stories to bolster incremental development. When stakeholders say, "I want to be able to search the fare based on my budget," the user story will be, "As a user, I want to perform fare search based on my budget so that I can plan to travel economically."

The user story helps the development team to understand the end-user goal and the function of the feature. User stories also aid point estimation. It gives a rough estimate to the development team on the time and effort required to develop a feature.

At SNHU travel, during backlog grooming sessions, the PO, scrum master, and development team selected the user story based on priority. The development team worked on designing the code, and QA created a test case document for the team. The user story document will be shared to develop the test cases showing user input and system output responses.

The scrum-agile approach embraces change. Software application projects always change the requirements to compete with the growing market and meet users' demands. The SNHU travel business team came up with the idea of marketing 'Detox and Wellness Travel' as their niche product. The PO shared the new requirements with the team, and the client's new requirements will be developed in the next Sprint.

The scrum master and PO did backlog grooming to add the new requirements to the product backlog. They did a quick estimation to allot time and resources. The QA team created a new test document with acceptance criteria, and the development team re-designed the code to add 'Detox and Wellness Travel' destinations.

The scrum agile framework drives the cross-functional team to develop a project iteratively and encompasses team collaboration. It is a well-thought-out design that includes scrum ceremonies throughout the sprint cycle to enable team and stakeholder communication. The scrum ceremonies are daily Scrum, sprint planning, sprint review, and sprint retrospectives.

Besides the ceremonies, the team uses information radiators such as Kanban board, product backlog, product vision, sprint backlog, and burn down and burn up charts.

The most effective practice is the daily scrum meeting, which provides transparency, inspection, adaptation, and impediments. It is a time-boxed event that occurs daily at the beginning of the shift. The Scrum master encourages the team to answer 3 questions,

* What did you do yesterday?
* What will you accomplish today?
* Are there any roadblocks?

Each development team will answer the above-said questions. It provides regular updates on team progress towards reaching sprint goals. The session also allows them to incorporate changes per client requests before release. These daily meetings will bring all team members onto the same page to discuss progress, get support from other team members, and share resources to overcome challenges.

An example of communication is the scrum-agile meeting that the PO scheduled to discuss the change, which was time-sensitive. The stakeholders have requested the promotion of detox/wellness vacation packages. The PO re-prioritized the sprint backlog accordingly. The development team made the necessary changes to the code to reflect the new requirements. The QA re-wrote the test cases to ensure all possible scenarios.

The team uses the JIRA project management tool to organize documents and communicate effectively.

Jira is a paid licensed software application introduced by Atlassian. The tool provides many features, including centralized project management, bug tracking, real-time collaboration, backlog management, roadmap planning, reporting, and external application integration.

It allows a team to create all organizational projects in one place. The team can review issues and tasks. It also supports Scrum and Kanban methodology by providing resources to help each framework.

The Scrum events that enhance continuous development are Sprint review and sprint retrospective.

**Sprint Review**: A review session will be held on the last day of every Sprint to share with stakeholders what is being done during Sprint. Any feedback from the client will be added to the product backlog.

**Sprint Retrospective**: A time-boxed meeting is scheduled at the end of every Sprint to evaluate lessons learned from past Sprint. This session's goal is to improve team performance.

Effectiveness of Scrum-agile approach for the SNHU Travel project:

Pros:

The Scrum-agile approach incorporates changes in time during the SDLC.

The agile principles provide greater flexibility to the team by allowing them to communicate rather than following documentation and a set process.

The agile approach is iterative. Where the development process is broken down into several iterations, the Software team will start with the most viable product and then build on it.

The approach promotes continuous integration and development.

Cons:

The Scrum-agile approach is for smaller development teams. The framework will not work on larger teams.

The team needs to be more present, or the project team should always have a backup resource to avoid interruptions and delays.

The team members should have all the required knowledge and skills to develop the product continuously.

For SNHU travel, scrum-agile was the best approach. The development of an online booking tool requires an iterative model. The stakeholders will not provide all requirements at the beginning of the project. So, the team created the most viable software application to add functionality. When stakeholders amend the requirements, the agile approach will allow the team to re-prioritize the sprint schedule accordingly.