Project Review & Retrospective Paper

The project provided an invaluable practical opportunity to apply many of the Agile concepts and techniques we have learned throughout the semester. We gained a comprehensive understanding of how Agile methodology functions in real-life applications, particularly when we formulated an idea from scratch and created tangible deliverables for the project. In developing Wellness Pulse, a mobile application, we addressed a significant gap in the market. Despite the availability of many health monitoring services, they are typically scattered across various apps. With this challenge in mind, we envisioned an app that integrates sleep, diet, and exercise tracking with AI-powered plans and connects users with specialists based on their data. Throughout the project, we maintained a clear grasp of the steps and purposes of each Agile technique and deliverable.

Initially, each team member proposed an idea, and we collectively decided on one concept to pursue. This collaborative start ensured all members were engaged from the onset. During the development of our Project Charter, we encountered differing views on the functionality of the Wellness Pulse application. This realization prompted us to clearly define the project's scope while staying receptive to innovative ideas and changes. We appointed the originator of the chosen idea as the Product Owner, who then articulated the envisioned features to the team, providing a clear overview of the project's scope. The creation of the Project Charter laid a robust foundation for our project, and with the Product Owner clearly defining the requirements, we constructed a Value Roadmap that outlined the project's evolutionary path. The

early appointment of a Product Owner proved critical, enabling us to emulate a real-life Agile project and minimizing the risk of scope creep effectively.

As we individually crafted our user stories, it ensured equal opportunity for all team members to contribute to the product backlog. This method proved beneficial as it fostered participation and engagement across the team. We merged our stories, eliminated duplicates, and finalized a list for estimation. We adopted the Fibonacci sequence for story point estimation, which provided a scale to gauge the complexity, effort, and uncertainty of our user stories. This scale (3, 5, 8, 13, 21) facilitated exponential growth in point assignment, mirroring the inherent uncertainties in estimating larger or more complex tasks. We initially struggled with the accuracy of estimates for technical stories due to our limited software development expertise. By conducting thorough research into the technical aspects and ensuring all team members understood the concepts before revising our estimates, we not only enhanced our technical knowledge but also improved the accuracy of our story estimations.

With our user stories refined and story points allocated, we integrated the features into the product backlog, prioritizing them based on their business value and required effort. High-value, low-effort features were elevated to the top of the list. We also considered potential dependencies among features to strategically order the backlog, which clarified the project's trajectory. We identified a shortfall in our initial backlog—the underrepresentation of testing. Although we learned from lectures that testing is crucial in Agile development, our backlog initially only included a general App Testing item. To address this, we expanded the backlog to include specific testing items for each feature and detailed the testing requirements in the Definition of

Done. This adjustment ensured that testing was thoroughly embedded in the project, enhancing our application's quality.

Though feature development was not required for this project, we applied an Agile incremental approach to the development of the wireframe. After assessing the product backlog, we began with a basic layout for the interface, incorporating primary features such as the account creation page, health biometrics page, and AI Assistance page based on their priority. In subsequent drafts, we integrated lower-priority features and refined the design. The Product Owner, actively involved in the wireframe development, provided iterative feedback after each draft, enabling us to adhere to Agile's principles of incremental delivery and continuous feedback.

In addition to the direct successes and challenges encountered in managing the Wellness Pulse application, we also faced challenges working on this course project as a team. Effective communication was a notable strength. Recognizing Agile’s emphasis on collaboration, we committed to robust team communication. Our preferred communication platforms were WhatsApp for instant messaging, Google Cloud for online collaboration, and Google Meet for virtual meetings. We also met in person for critical deliverables like the Fibonacci sequence game and the product backlog creation. This proactive communication approach allowed us to adapt seamlessly to changes in project scope. Given the constraints of a school project, we had limited time for extensive planning. Nevertheless, effective communication helped us consolidate our vision of the end product as we progressed through various deliverables and remained open to changes, embodying the Agile spirit.

Moreover, we effectively utilized JIRA to manage our teamwork. We maintained a separate project specifically for completing assignments, assigning weekly tasks to individuals after our meetings. The Kanban board was instrumental in tracking each task's progress, and we took steps to ensure all deliverable components were completed by the deadline. This approach established clear accountability and motivated team members to fulfill their responsibilities promptly. It also increased transparency among team members, allowing us to support those struggling with tasks and ensuring smooth progress across the board. Although we did not develop the actual application, using JIRA to manage our group assignments provided a realistic experience of managing an Agile project.

Despite these strengths, we encountered challenges in maintaining engagement and motivation within the team. From the outset, we recognized that maintaining morale would be challenging, given the hypothetical nature of the project and competing demands from other courses and projects. While team members generally responded well in communications, there were instances when some had to assume greater workloads to compensate for others. Additionally, holding two meetings per week to establish responsibilities sometimes led to insufficient reflection on past work and collaboration. Looking back, integrating "sprint reviews" into our meetings could have been beneficial. These reviews would have allowed us to evaluate our strengths and areas for improvement continuously, potentially boosting team morale and encouraging sustained engagement.

Overall, this project was an excellent opportunity for our team to immerse ourselves in Agile project management. Not only did we conceive a viable project idea, but we also experienced working as an Agile team to plan and start implementing these plans. Through this experience, we learned to navigate the requirements of a new project and integrate stakeholder feedback continuously. Although we faced challenges in maintaining team morale, we identified ways to enhance our processes in true Agile fashion. The absence of prior firsthand experience in an Agile environment made this project an effective manner to learn how Agile methodologies contrast with more traditional approaches which the team was familiar with. As a team, we appreciated the benefits of Agile, including its flexibility, enhanced collaboration, and heightened customer satisfaction. This experience has piqued our interest in pursuing Agile work environments in our future careers, underscoring the relevance and effectiveness of Agile methodologies in contemporary project management.

* * * * * * *