Introduction:

The aim of this project report is to provide an overview of the development process of Snake.io game using the Agile methodology. The report summarizes the work done by the development team, highlights the challenges faced, and provides insights into the benefits of using Agile for software development.

Project Overview:

The Snake game was developed using the Scrum framework, which involved breaking down the project into three sprints, each lasting two weeks. The development team consisted of five members, including a project manager, two developers, a tester, and a designer.

Development Process:

The development team used various programming languages, frameworks, and libraries to develop the Snake game. The game was developed using Python, and the Pygame framework for game development. The development team followed coding conventions and design patterns, which helped to ensure code quality and maintainability. To ensure that the game met the user requirements, the development team followed a test-driven development approach, which involved writing automated tests before writing the code.

Product Owner Involvement:

The (hypothetical) product owner was involved throughout the development process, providing feedback on the user stories and prioritizing them based on their importance. The product owner participated in sprint review meetings, providing valuable feedback on the features developed in

each sprint. The development team also worked closely with the product owner to ensure that the user stories were implemented correctly and met the product owner's expectations.

Collaboration and Communication:

The development team communicated regularly during daily stand-up meetings, sprint planning meetings, and sprint review meetings. The team collaborated on coding tasks, which helped to improve code quality and knowledge sharing.

Sprint Backlog:

The team worked together using the Scrum framework. They had a Sprint backlog consisting of the following user stories:

Sprint 1

User Story 1: As a player, I want to be able to move the snake using arrow keys.

User Story 2: As a player, I want the snake to grow longer when it eats food.

User Story 3: As a player, I want the game to end if the snake collides with a border or itself.

Sprint 2

User Story 4: As a player, I want to be able to see my score.

User Story 5: As a player, I want to be able to restart the game if I lose.

User Story 6: As a player, I want there to be a main screen before the game starts.

Sprint 3

User Story 7: As a player, I want the game to be aesthetically pleasing.

User Story 8: As a player, I want to be able to be obstacles to make the game a challenge.

User Story 9: As a player, I want there to be background music.

During Sprint 1, the developers worked on the game mechanics. The project manager helped to coordinate their efforts and facilitated daily stand-up meetings to discuss progress and any issues they encountered.

At the end of Sprint 1, they had a working prototype of the Snake game that allowed the player to move the snake using arrow keys, grow longer when it eats food, and end the game if it collides with a wall or itself.

During Sprint 2, the developers added scoring functionality and added the ability to restart the game, and also implemented a main screen in the application. The project manager continued facilitating daily stand-up meetings to ensure the team was on track.

At the end of Sprint 2, they had a fully functional game that included scoring, a main screen, and restart functionality.

During Sprint 3, the developers added the ability to restart the game, obstacles to make the game a bit more challenging and background music. The project manager helped to wrap up the project and ensured that all the user stories were completed.

At the end of Sprint 3, they had a finished Snake game that met all the requirements specified in the user stories. They then presented the game to the product owner and received feedback, which they used to improve the game in future iterations.

Conclusion:

The development team successfully developed a fully functional Snake game that met all the requirements specified in the user stories. The Agile methodology proved to be effective in managing the development process, allowing the development team to deliver high-quality code on time. The development team also learned valuable lessons from the project, including the importance of effective communication, collaboration, and feedback. The Agile methodology helped the team to be more flexible and adapt to changes, making it a valuable approach for future software development projects.