User story	Task	Task Assigned To	Estimated Effort per Task (in hours)	Actual Effort per Task (in hours)	Done (yes / no)	Notes
Assignment Exercises	Task 1: Applying the Template Method Design Pattern	Mahira	2 hours	1,5 Hour	Yes	The Template Method design Pattern is applied to the ships. In which the ship is an abstract class and the specific ship types extend this class. This can be seen in the documentation.
	Task 2: Applying the Factory Method Design Pattern	Mahira	2 hours	6 hours	Yes	The Factory Method design Pattern is applied to the board. In which there is a boardcreator interface which is implemented by the standardboardcreator and enhancedboardcreator & an abstract class board which is extended by the standardboard and enhancedboard. This can be seen in the documentation.
Different Game Modes	Task 1: Having different board shapes specifying the Standard and Enhanced Game Mode.	Mahira	3 hours	3 hours	No	The structure to implement a different board easily is there due to the Factory Method Design Pattern. Also theoretically the creation of the enhancedboard is also ready but not yet working properly.

Name Story	Task 1: Checking if a score is A High Score for the leaderboard	Yash Kalia	1 hour	1/2 hours	Yes	Instead of creating a method we just used a special query which would get us the top 5 high scores in descending order.
Name Story	Task 1: Assignment 3 Exercise 2	Glenn and Yash	1.5 hours	3 hours	Yes	We had no idea how to draw a component diagram, which we had to find out. We used tutorials. We made the component diagram on Paint and copied it to Word, where the description is added.
Testing	Database Tests	Pravesha	2 hours	3 hours	No	Somehow the tests do not directly test the database at hand. This is most probably due to the nature of the tests. We made a rough start however, none of the tests are currently passing
Testing	Score System tests	Pravesha	2 hours	2 hours	Yes	Due to the weak points of each ship, the number of points assigned varies. This means that the weak/strong points must have all been tested which took more time than initially anticipated

Leaderboard	Implementing the leaderboard to show highscores	Pravesha	1.5 hours	2 hours	No	The back-end of the leaderboard should be functioning however, I still need to connect it to the button on the GUI.
Tutorial	Implementing the tutorial	Pravesha	1 hour	1,5 hour	Yes	The tutorial to help the user navigate the game is implemented but work still needs to be done on the GUI
GUI	Task 1: implementing all the different scenes into one working program	Jeroen Hofland	3 hours	4 hours	Yes	The original was made with a scene builder which is an awful program to create a custom program so had to do a lot of rewriting.
	Task 2: Designing the UI based on our key requirements	Jeroen Hofland	4 hours	5 hours	Yes	As noticed above the original was made in a scene builder which made the designing a bit painful, it took some extra time but succeeded in the end.

Main problems Encountered

Problem 1:

Description: by applying the factory method design pattern to the board I've encountered many problems. Refactoring after writing code seven weeks is a real pain. First of all in the first attempt I applied the factory method incorrectly which caused that the structure was similar to the template method. By first drawing the class diagram I figured out how to apply the factory method design pattern to our code. When the structure of the board was there and I start running the game, the entire game wasn't working anymore. First the ships couldn't be placed anymore. This was causes because in the first attempt I created a getBoard() method and at some places this method was still be used. So after removing the getBoard() at the places it did not belong, such as the placeShip method, this was fixed. Then when shooting every time an error appeared when the player shot the board of the opponent. This was causes by

again the getBoard() method which was in the scoreSytem class when getting the misses and trying to calculate the achieved score. Then when the functionality of the game was again working finally, all the opponent related tests were failing giving and NullpointerException(). After some time I figured out this was caused by creating an instance Board In the Board class itself. Also it took a lot of time adapting all the existing classes with some added parameters or changed instance names. These all are very minor mistakes which seem afterwards very simple. However it took a lot of time finding them all.

Problem 2:
Description: in task 1: Having different board shapes specifying the Standard and Enhanced Game Mode. JavaFX is a very compact library. At this point I haven't seen an option in JavaFX to create a grid with a specific shape. At this moment I have fade away some squares resulting in a different board shape. I hope I will be able to find a different way by the next sprint. I haven't had enough time this sprint to figure this out. Also I haven't had the time to check whether this fading away really results in a different board shape. Again this will be solved next sprint.

Adjustments for the next Sprint Plan:
- Again the amount of time it takes to figure something out is underestimated.

- Testing more thoroughly, since we are not satisfied yet with the amount of code coverage and didn't get time for it this sprint.

- Maintain the backlog a bit better, especially the usage of the issue template.