

Course Name: *Basic JavaScript*

Class: *Frontend Developer Web Security*

Term: *HT-2023*

BATTLESHIPS

INTRODUCTION

Background description, question, delimitation and goals	<p><u>Background:</u> In this task you will build a "Sink a ship" for a customer in JavaScript. The company needs to have the prototype for the game ready ASAP. You will build a game that can be played both from the browser's console and in the browser window. The game is meant to be played between 2 players who share the computer between them.</p> <p><u>Goal:</u> An interactive "sink the ship" game that can be played in the browser</p> <p><u>Limitation:</u> You may not use third-party libraries (React or Bootstrap) or tools such as JQuery, but the application must strictly only use HTML, CSS and JavaScript.</p>
Why should you do this? work?	<p><u>Purpose:</u> The student must learn to apply</p> <ul style="list-style-type: none"> • The student should gain an expanded understanding of how he implements a solution in JavaScript based on a given specification • The student must work with problem solving and design of JavaScript code according to best practice
What will you deliver?	<p>The following must be delivered:</p> <ol style="list-style-type: none"> 1. All project files or github link to repo.

YOUR PROJECT TASK

What will you do?	<p>The company that will eventually implement the game on a large scale first wants to see a working prototype that works logically and without bugs. The idea is that they will later be able to use your code to implement the game on different platforms. To describe the game, for the sake of simplicity, they have explained based on a game round, first how it should work when playing via the browser's console, then how to play via the browser's window.</p> <p>Games based on the console</p>
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Step 1: The console asks player 1 to mark their 5 ships (they must be at least 2 cells and at most 7 cells long. They must consist of only horizontal cells in a row, or vertical cells in a column)

> Choose your 5 ships!

> Ship 1

> Player 1: 0.3 0.4 0.5 (user enters)

(The console shows the ship and the game board)

			1	1	1				

(The computer asks for the next ship)

> Ships 2

> Player 1: 5.7 6.7 7.7 8.7 9.7

(The console shows the ship and the game board)

			1	1	1				
							1		
							1		



							1		
							1		
							1		

The game continues to mark games until all 5 ships are marked. If the user gives input that is incorrect, i.e. has ships that are not linear in a column or row, an error message is given and the player is given another try. When player 1 has marked all 5 ships, the turn passes to player 2 who takes over the computer and marks his 5 ships.

Step 2: The console asks player 2 to mark their 5 ships

> Choose your 5 ships!

> Ship 1

> Player 2: 5.4 5.5 5.6 (user enters)

(The console shows the ship and the game board)

				2	2	2			

The game continues until player 2 has marked all 5 of his ships. Now it's time for the game round.

Step 3: The computer asks player 1 for a guess to fire the missile into a cell

> Choose your target!

> Player 1: 1,2

(Console shows boom. Boom is shown with X)

		X							

Step 3: The computer asks player 2 for a guess to shoot the missile into a cell

> Choose your target!
> Player 2: 0.4

(The console shows hit. Hit shows the player's number)

				1					

(Player 2 can now shoot missile again)



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	<p>Choose your target!</p> <p>> Player 2: 1.4</p>
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(Console shows boom, and next player gets to continue)

				1					
				X					

The game continues in this manner until one of the players has shot down all of the opponent's ships. You have a free hand to show the hits that the player has made so far during the round of the game before a missile launch or not, you also have a free hand to show the score. It can be fun not knowing who is leading, right?

Games from a browser window should behave the same as in console, although now the game board should constantly show hits and blocks from a player's perspective. You therefore need to clear the game board every time the players switch so that one does not get to see the other's game board.

It is important that you submit the project on time as investors have requested that this deadline be met in order for the project to get the go-ahead. Everyone at the company trusts you, both the project manager and the management team. Good luck!



SUBMISSION AND ACCOUNTING

Submission	<p>Submission takes place via Learn Point date 12/11 no later than 23:59.</p> <ul style="list-style-type: none"> • Submit a document with link to github repo or project files.
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ASSESSMENT AND FEEDBACK

<p>Assessment takes place against the following grading criteria:</p>	<p>The grading criteria for Passed and Passed respectively are: (Grading criteria linked to the Submission or Project assignment are copied from the current course planning and enter below)</p> <p>Passed •</p> <p>The student has solved the task for the browser console according to specification and without "bugs"</p> <ul style="list-style-type: none"> • The student does not have duplicated functions and uses variables sparingly <p>Well Passed •</p> <p>The student has implemented the game for the browser interface according to specification and without "bugs"</p>
Feedback	<p>The groups receive written feedback via the learning platform LearnPoint by the date 26/11 at the latest</p>