

# Shipt Web Development Coding Challenge

Welcome to the Shipt web development coding challenge! For this challenge, you will be building a game of battleship. We have outlined some guidelines for you to follow below, including how you will be evaluated and how to submit your challenge. You may use any programming language you like.

## Guidelines

Create an implementation of the game Battleship.

The game consists of:

- 2 Players
- Each player has a grid on which to place ships
- Each player begins the game with one or more ships in play
- The players take turns choosing a position on the opponent's grid to attack

The result of an attack must be one of:

- "Hit" if the opponent has a ship covering the position
- "Miss" if there is no ship covering the position
- "Already Taken" if the position has previously been attacked
- "Sunk" if all the positions a ship covers have been hit
- "Win" if all the ships on the opponent's grid have been sunk

As is often the case, the given specification is ambiguous in regards to some details about a game of Battleship. Feel free to add constraints as you see fit in order to clarify the specification and limit the problem scope to something appropriate for your allotted time.

## Evaluation

Your solution will be evaluated on the following:

- Appropriate use of software design principles
- Proficiency with the chosen language and development stack
- Correctness - How do you verify the correctness of the solution?
- Maintainability - How easy is the solution to understand and modify?
- Extensibility - How easily could the solution be adapted to specification changes?
- Performance - What is the algorithmic complexity of the solution?
- Completeness - How much of the specification does the solution implement?

Your code should have some way of demonstrating functionality such as log statements, unit tests, console output, etc.

## Submission

You have a choice of options to submit your challenge:

- Commit your code to your personal GitHub account and send us a link at [coding@shipt.com](mailto:coding@shipt.com)
- Create a new GitHub account to commit your code and send us a link at [coding@shipt.com](mailto:coding@shipt.com)
- Save your challenge as a .zip file and send back to us at [coding@shipt.com](mailto:coding@shipt.com)