Create the battleships game!

This project is to create a digital version of the popular board game known as

battleships. Battleships is a two player game with 2 phases. In the first phase the

player’s ships are placed on the board. In the second phase each player takes it in turns

to select grid squares on the board in an attempt to find and destroy their opponent’s

ships. Once one player has lost all of their ships the game is over and the player who

still has ships on the board is the winner.

Each player has a number of ships including: 2 patrol boats (1 x 2), 2 battleships (1 x 3),

1 submarine (1 x 3), 1 destroyer (1 x 4) and 1 carrier (1 x 5).

There are a number of rules that players must follow.

* • 2 Ships cannot occupy the same space on the board.
* • If a player scores a ‘hit’ on their opponent, then they get a second shot.
* • Ships cannot be moved once they have been placed.

Advice

Battleships is a seemingly simple strategy game but without careful planning it can be

easy to become “lost” in the project. It is recommended that you attempt to complete

the project in a set of stages where with each stage you increase the level of

complexity. Remember that as the complexity of your project increases you may find

that you wish to go back to a previous version in some cases so it is highly advised that

you create versioned copies of your project at each stage.

An advised set of stages are:

Stage 1: A 3 x 3 grid with one ship that is 2 pieces long is placed on in the grid.

Stage 2: A 3 x 3 grid with 2 ships that are 2 pieces long and placed on the grid with validation to

ensure legal placement.

Stage 3: Two 3 x 3 grids with 2 ships where players take alternating turns taking shots at the

other grid.

Stage 4: Differentiation between ‘hits’ and ‘misses’ implemented.

Stage 5: Checks for sunk ships with game over when one player has lost all their ships.

Stage 6: Two 12 x 12 grids with all 7 ships placed in valid locations.

Stage 7: Players can select the placement of their ships on the grid during phase 1.