**BATTLESHIP**

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**General description:**

Our web application serves as a way of decompressing, for those in need of relieving their stress, a tactical challenge, for those looking for a challenge, and most importantly, an emulator; an answer for the nostalgia-filled fans around the globe, that played, and still play, the physical board game.

**Registration and logging in:**

The user needs to first, sign in the application; a registration form, consisting of 4 fields: nickname, email address, password, and password confirmation will be presented to the user. A confirmation email will be sent to the user’s address; after verifying the credentials, the user is redirected to a menu. The user can reach that menu by simply logging in using his nickname/email and his password.

The menu contains, alongside a short description, and the number of wins and losses, 3 (optional: 4,5) buttons:

* vs. PLAYER: allows you to play a game versus another player
* vs. AI: allows you to play a game against the computer
* LOG OUT: logs the current user out of the session
* (optional): Tutorial, tips&tricks

**Gameplay mechanics:**

**The GRID** = the board where the action happens; a matrix of 10x10 squares, rows numbered from 1 to 10, columns named from A to J.

**The SHIPS** = there are 5 of them; each occupies continious straight line of a different number of squares, either on a row, or on a column; (meaning: no “L”’s or any similar formation, and no diagonal placements; also, the line must be unnintrerrupted).

|  |  |
| --- | --- |
| ship | number of squares |
| carrier | 5 |
| battleship | 4 |
| cruiser | 3 |
| submarine | 3 |
| destroyer | 2 |

**HIT/ MISS** = translated into a RED\_X/ BLUE\_SQUARE; this indicator tells us if the square was occupied by a portion of the ship (resultin in a HIT), or the square was empty (MISS).

**Gameplay rules:**

* START\_OF\_GAME: the player is presented with the following objects:
  + SHIP\_SECTION: a zone that contains the ships.
  + YOUR\_GRID: a grid that you will place the ships on, using a drag’n drop mechanic (plus ship rotation: horrizontally/ vertically); IMPORTANT: the ships CANNOT be placed:
    - On top of each other (square juxtaposition from 2 different square groups).
    - Partially or complely outside of YOUR\_GRID (more than 0 squares of a group are placed behind a margin of the grid).
  + ENEMY\_GRID: an empty grid, with 10x10 squares, just like yours.
  + START: press this button after you placed your ships, and wait for your opponent to do the same. Against the computer, the waiting time is significantly reduced or non-existent (we assume that the computer has already placed the ships randomly).
* TURNS: each player will take a turn, one after another.
* YOUR\_TURN: choose a spot on your opponent’s board; if that spot is part of an opponent’s ship, it will be marked with a red “X”, otherwise, it will be coloured in blue, and stay this way for the rest of the match.
* ENEMY\_TURN: your opponent does the same; in case of a computer, the spot is chosen randomly (optional: ML algorithm).
* ENDGAME: the game will end instantly when a player’s SHIP\_SQUARES are all HIT, declaring the WINNER, and the LOSER; afterwards, the player will be redirected to the 3-button menu we mentioned earlier; the WIN/ LOSS ratio will be accordingly incremented.

**Problems to-be-discussed:**

* Localhost? (splitscreen => 2 players possible, BUT cheating comes into play)

**Specifications:** TBA