

Bilgewater Brigadiers: Kevin Cao (Pipi), Andy Lin (Sam), Austin Ngan (Gerald), Shadman (Ducky)  
SoftDev  
P02  
2021-03-01

**Description:** Making a game akin to Hasbro's BATTLESHIP, a game that uses the classic rules for Battleship and adds some twists to the game, using differently shaped ships, maps and abilities.

### Components and Purpose:

- Two game boards that switch after each turn (if local client), after each turn there should be a ready screen, so there isn't any tomfoolery going on
- Leaderboard
  - Ask both players for username at start of the game
  - leaderboard separated by game mode for wins
- In game currency in order to purchase different weapon type
- Possible features:
  - Multiple different maps for players to use
  - ~~◦ Online gameplay~~
    - ~~Chat between players~~
- Flask
  - Display HTML Page
  - Data is pulled from the database in order to populate each webpage
- JavaScript:
  - Almost all the game functionality
  - Detect clicks & confirms move
  - Canvas to display board
  - Updating board
  - Animations (hit, explosions)
    - Add when other elements are finished
- SQL Database:
  - Keeps track of statistics of each player → Leaderboard
- Bootstrap:
  - Simple CSS elements to make website uniform

### Database Organization:

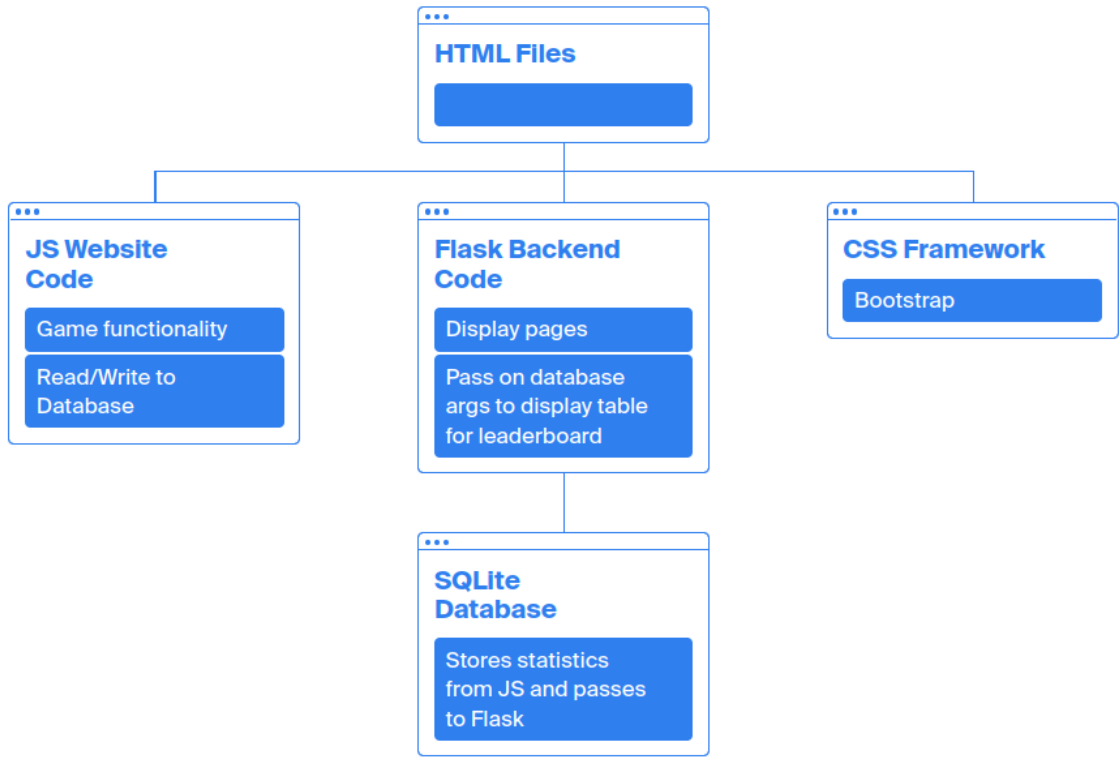
Username (String,	Win ratio (Float)	Hit ratio (Float)	Powers used (Int)	Games Played	Games Won (Int)
----------------------	----------------------	----------------------	----------------------	-----------------	--------------------

primary key)				(Int)	
--------------	--	--	--	-------	--

Site Map:



Component map:



### Division of Tasks:

Kevin: Project Manager & VM(Digital Ocean Droplet) & Frontend (registering clicks/UI)

Andy: Frontend (board management)/ digital ocean debugger

Austin: Backend (Leaderboard DB, connection between frontend and backend)

Shadman: Frontend (registering hits, changing maps, abilities)

### Stages:

- ☐ Initial functioning Battleship game (10x10 board, 5 wide, 4 wide, two 3 wides, and a 2 wide)
- ☐ Leaderboard/statistics
- ☐ Different maps with tetromino shaped ships
- ☐ Abilities, separated into two different game modes

### Guiding Questions/Ideas:

- 2 different modes (one w/ and one w/o abilities)
- How are we going to implement online play?
- Use canvas as Battleship board
- Abilities: radar (scans a certain chosen radius of the other player's board), bomb (hits a certain radius/area of the board), airstrike (hits x amount of random spaces on the board), mine
- Energy system for each player
  - Energy is gained by hitting ships and sinking them
  - Used for abilities
- Extra maps later on
  - Allows for replayability
  - Non-rectangular maps

Target Date: 03-28-22 (March 28th, 2022)