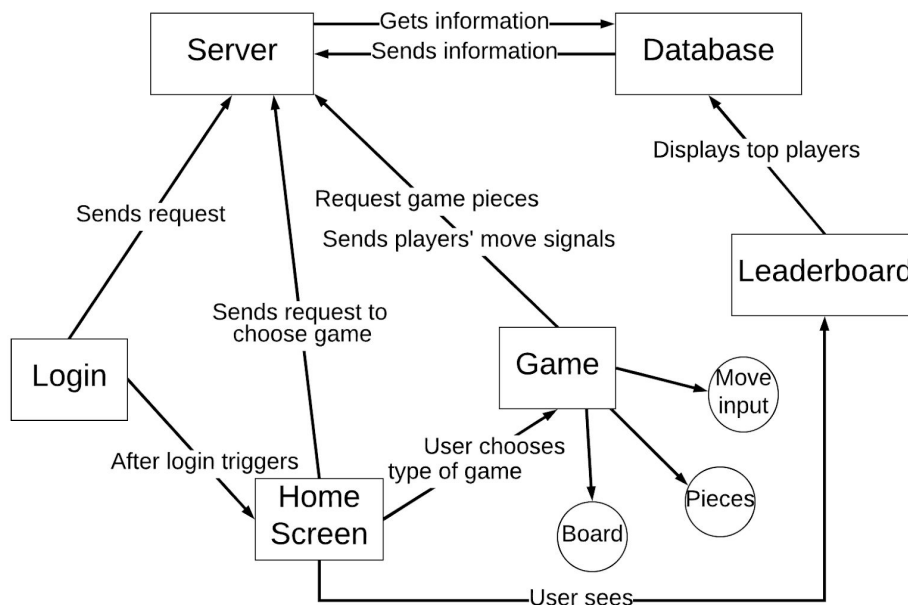




Incremental and Regression Testing - Team 5

David Wood, Alexander Ferrard, Ayush Patel, Eric Vondrak, Sanjit Reddy Sama

Classification of Components



Server

Input - any sort of request

Output - instructions based on request

Dependent components - database is dependent on server; login, home screen, game and leaderboard are all dependent on server

Database

Input - request for information

Output - information based on request

Dependent components - server and leaderboard are dependent on it

Login

Input - user's login information is authenticated by Google and then their profile information is sent to our server

Output - access or denial to the game; if access, page is updated to show that user is logged in

Dependent components - dependent on server

Home Screen

Input - a screen showing the user several options

Output - a signal to the server directing the user to the desired location depending on button clicked

Dependent components - dependent on server, game depends on home screen

Game

Input - a multiplayer/single game, in either easy/hard mode

Output - game interactions and signals to the server depending on user's moves in the game

Dependent components - dependent on server, database, homescreen

We will be using bottom up incremental testing because it makes more sense to test each small individual unit before testing the system as a whole. This is especially important when testing the individual components of the game module. If one of the one of the game submodules isn't working, the entire game module will not work properly.

Incremental Testing

Defect #	Description	Severity	How Corrected
1	Server module can't update the front end display when the opponent makes a move	1	Used semaphores to wait for the opponent to take their turn so as to not waste processing power.
2	GameController module in the Player class was not exported to other files so the Server ran into an error when attempting to use that class definition	2	Added an export command
3	The GameController uses a function checkHit in the player function and the AI class does not have a checkHit function defined in it	2	Add the checkHit function to the AI

4	In a single player game, the Server was trying to create two Player objects instead of an AIOpponent object and a Player object	2	This was fixed with the creation of an AIOpponent Object instead of a Player object
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Regression Testing

Defect #	Description	Severity	How Corrected
1	After a user logs in for the first time, the login module caused the home page module to become stuck waiting for a response from the server.	1	Server was waiting for a response that never came, so Connection.js was updated to send this response
2	Adding the case for a Player object to be an AI breaks the checkHit function in the GameController object	2	Assigning a dummy variable to the AI
3	The player constructor in GameFunctions changed its number of arguments. The Server was using this constructor and when the number of arguments changed, it caused an error	3	The constructor was fixed

Update Product Backlog

Backlog ID	Functional Requirement	Hours	Status
1.	As a user, I would like to sign up for an account	4	Completed in Sprint 1
2.	As a user, I would like to sign out of my account	4	Completed in Sprint 1
3.	As a user, I would like to sign in to my account	3	Completed in Sprint 1
4.	As an administrator, I would like	4	Completed in Sprint 1

	to have the ability to view, delete, and create users in the backend.		
5.	As a user, I would like to have the ability to change my password.	3	Incomplete - Planned for Sprint 2
6.	As a user, I would like to have the ability to terminate my account.	3	Incomplete - Planned for Sprint 2
7.	As a user, I would like to be greeted with the option to select single player or multiplayer on the homepage.	5	Completed in Sprint 1
8.	As a user, I would like to have two modes of single player where I can play the computer on 'Easy' or 'Hard'.	8	Completed in Sprint 1
9.	As a user, if I decide to leave my game I will be warned with a popup if I would like to leave.	3	Incomplete - Planned for Sprint 2
10.	As a user, if I leave my game I would like my departure to be counted as a forfeit.	3	Incomplete - Planned for Sprint 2
11.	As a user, if I select single player, I would like to be able to see a game board that includes a hit screen, game board, and ships.	10	In Progress - Planned for Sprint 2
12.	As a user, if I start a game, I would like to be able to select a ship and place it on the game board.	4	Completed in Sprint 1
13.	As a user, if I click on a ship, I would like to be able to place it on the game board	4	Completed in Sprint 1
14.	As a user, if I click on a placed ship, I would like to be able to change the orientation of a ship.	3	Completed in Sprint 1

15.	As a user, if I have finished placing a ship, I would like to be able to press a confirm button to keep in in place while I move on to place another ship..	2	In Progress - Planned for Sprint 2
16.	As a user, if I have not confirmed a ship's position, I would like to not remove the preview's position by clicking on another ship	2	Incomplete - Planned for Sprint 2
17.	As a user, if I have finished locking my ships, I would like to be able to press a button to start the game.	2	Completed in Sprint 1
18.	As a user, if I click on the opponent's game board, I would like to be able to see if my attack hit or miss the opponent's ships.	3	Incomplete - Planned for Sprint 2
19.	As a user, if my opponent has attacked, I would like to see on my game board where they attacked and if they hit my ship.	3	In Progress - Planned for Sprint 2
20.	As a user, if I destroy all of my opponent's ships, I would like for my victory to be declared.	2	Completed in Sprint 1
21.	As a user, if I complete a game, I would like to be directed back to the home screen.	2	Completed in Sprint 1
22.	As a user, if I don't know the rules, I would like to be able to read them from the site.	3	Planned for Sprint 2
23.	As a user, If I want to play with another person, I would like to be able to select multiplayer from the homepage.	3	Planned for Sprint 2
24.	As a user, after I have clicked multiplayer on the homepage, I would like to be able to choose to host a private game.	5	Planned for Sprint 2

25.	As a user, after I have clicked multiplayer on the homepage, I would like to be able to choose to host a public game.	5	Planned for Sprint 2
26.	As a user, if I want to play a private game, I would like to be able to play a game against the computer.	2	Planned for Sprint 2
27.	As a user, if I want to host a private multiplayer game, I would like to be provided with a game key that I could give to someone else.	3	Planned for Sprint 2
28.	As a user, if I want to join a private multiplayer game, I would like to be able to put in a provided game key to join another person's game and play against them.	5	Planned for Sprint 2
29.	As a user, if I don't care who I play with, I would like to be able to join a public lobby.	5	Planned for Sprint 2
30.	As a user, if I win or lose a game against another person, I would like it to be recorded in my profile.	2	Planned for Sprint 2
31.	As a user, if I feel like I played well in a game, I would like to see the statistic of my previous games in my profile.	5	Planned for Sprint 2
32.	As a user, if I want to know where I rank in a list of all players who have played on the site, I would like see a leaderboard containing all players.	6	Planned for Sprint 2