Design Inspection, Code Inspection, Unit Testing

Team 20 | Thomas Chen, Kelvin Choi, Scott Merritt, Aaron Althoff, Dan Morton

Design Inspection Defects

Product	Battleship 408 Design Inspection
Date	10/12/2018
Author	Team
Moderator	Kelvin Choi
Inspectors	Dan Morton, Thomas Chen, Aaron Althoff, Kelvin Choi

Defect #	Description	Severity	How it was corrected
1	Winning a game should lead to a victory message being displayed, notifying the user that the game has ended.	1	New string field was created and handled in backend with appropriate response to send back to client.
2	Client should only send the beginning and ending coordinates of a ship to the backend, instead of sending the full list of a ship's coordinates.	1	Client now sends a request to backend with only the required two coordinates.
3	Request and Responses between front end and back end should include a userID field in POJO classes.	2	POJO classes were updated to include a userID field.
4	When moving a ship into an already hit cell, the cell type should be updated to its current state.	1	Cell type was correctly updated with respective ship enum value.
5	When creating a new game, the user should see a display on playing multiplayer or against an AI.	1	Game Setup page now shows the different options on choosing opponent type.

Code Inspection Defects

Product	Battleship Model Module Inspection
Date	10/12/2018
Author	Thomas Chen
Moderator	Kelvin Choi
Inspector(s)	Thomas Chen, Kelvin Choi

Defect #	Description	Severity	How it was corrected
1	Computer strategies sometimes tried to access cells outside of the boundary of the grid, resulting in an out-of-bounds exception	2	Put checks within computer strategies to ensure the selected cell was a real cell
2	When playing against a computer strategy, if the computer could win it would not do anything resulting in the game not ending	1	Alter the code for the computers to end the game if possible
3	Similar to defect 2, game would not display defeat message if player lost	1	Altered code to display defeat message upon game ending

Product	Battleship New Game Module Inspection
Date	10/12/2018
Author	Scott Merritt
Moderator	Scott Merritt
Inspector(s)	Dan Morton, Scott Merritt, Aaron Althoff

Defect #	Description	Severity	How it was corrected
1	When timer was active in settings, it would start counting from when this module was opened instead of when game started, causing time to be skewed at game start	1	Change the module associated with timer from newGame to gameWindow
2	NewGameRequest was not being parsed into backend NewGameRequest model	1	Implemented Jackson object mapping.
3	Upon submitting the new game from, the application would push to the game window before user received response.	1	Made web service subscribe to the response route for submitting a new game request upon clicking first cell to place ship. Once a response is successfully received, router pushed to game-window view.

Product	Battleship Game-Window Module Inspection
Date	10/12/2018
Author	Scott Merritt
Moderator	Scott Merritt
Inspector(s)	Dan Morton, Scott Merritt, Aaron Althoff

Defect #	Description	Severity	How it was corrected
1	Component renders ships inverted compared to what is being pulled down from the backend	1	Adjusted arithmetic for finding cell Id from coordinates. Id = y *gridSize + x
2	Frontend was rendering User Attack and Enemy Attack results on the wrong coordinates (information was inverted)	1	Adjusted arithmetic for finding cell Id from coordinates. Id = y *gridSize + x
3	Backend was sending back an empty set of coordinates for each ship to be placed (all coordinates were (0,0), but number of coordinates per ship was correct)	1	In the UserShip constructor, the x and y parameters were never assigned. Fixing this problem resolved this bug.
4	Game-window was unable to pull down Game Response from backend in some cases	2	This was due to an issue in the new-game window component pushing to the game-window component to soon. When the frontend would request the backend in game window it would come back undefined. Upon fixing sequence of calling backend commands in newGameWindow.ts, this issue was resolved.
5	System was marking user and enemy attacks on wrong grids	1	Had to flip which grid the system was marking on each turn.

6	System was not showing when a userShip was hit	1	Game model Ship object were never loaded into new Game Request object, leading to the information not to propagate. To fix this, ships were added to PlayerOne in EngineController.java:initializeGame().

Product	Battleship Settings Module Inspection
Date	10/12/2018
Author	Dan Morton
Moderator	Scott Merritt
Inspector(s)	Dan Morton, Scott Merritt, Aaron Althoff

Defect #	Description	Severity	How it was corrected
1	Settings page was not being displayed when routing from menu	1	Missing bracket was not being caught by VS code compiler; once fixed the page would display correctly
2	Dark mode not applying correctly to all other modules when changed in settings	1	Create separate dark mode css styles for each module and add the styles to the modules when darkmode is active
3	Timer displaying in incorrect format (only counting seconds instead of differentiating minutes and seconds)	1	Changed how timer is displayed in the HTML to calculate minutes and seconds instead of just displaying the value of the timer

Product	Battleship Database Inspection
Date	10/12/2018
Author	Scott Merritt
Moderator	Scott Merritt
Inspector(s)	Dan Morton, Scott Merritt, Aaron Althoff

Defect #	Description	Severity	How it was corrected
1	User Table was not linked to OverallStats or GameStats Tables	1	Established foreign key fields in User table to establish relationship between the two tables
2	WinLossPercentage field was created to to expect int values rather than double	1	Changed field to accept double values

Unit Testing Defects

Product	BattleShip Model Module Test (CLI Game Implementation)
Date	10/12/2018
Author	Thomas Chen

Defect #	Description	Severity	How it was corrected
1	Ship was not correctly returned as sunk when all ship points were hit.	1	For loop was not traversing the full length of the ship points array; this has been corrected
2	When moving a ship, the ship's new coordinates still remained as its old coordinates.	1	Called function to update the ship's new coordinates.

3	When a ship moved to a new location, the occupied cell type was still classified as water.	1	Cell type was updated to its proper type in cell type handling method.

Product	BattleShip Settings Module Test
Date	10/12/2018
Author	Scott Merritt

Defect #	Description	Severity	How it was corrected
1	Certain elements were not being changed when the user toggled dark mode on	1	Found elements that weren't being updated and fixed them accordingly

*This Module is responsible for interfacing backend cli battleship game with the frontend

Product	BattleShip Core Response Module Test
Date	10/12/2018
Author	Dan Morton

Defect #	Description	Severity	How it was corrected
1	NewGameRequest could not be parsed by Jackson JSON to java parser.	1	This was due to the Model class Ship being unable to be Parsed. Therefore a inner class User Ship was Defined, and each Ship object from the backend was converted into UserShip, then fed to the response.
2	Model class Ship could not be parsed by Jackson to JSON driver.	1	Inner classes UserShip and _Point were

			created with explicitly defined fields to conform to interface on frontend.
3	NewGameRequset$UserShip could not be parsed by Jackson JSON to java parser.	1	@JsonProperty() plags were inserted to explicitly define the class variables.
4	NewGameRequest$_Point could not be parsed by Jackson JSON to java parser.	1	@JsonProperty() plags were inserted to explicitly define the class variables.
5	AttackRequest had ambiguous field userId	1	Adjusted model to only contain one coordinate to attack (x,y) on front end and backend.

Product	BattleShip EngineController Module Test
Date	10/12/2018
Author	Dan Morton

Defect #	Description	Severity	How it was corrected
1	/placeShips end point and very slow posting to to /topic/confirmPlacement endpoint.	1	Due to a leftover Thread.sleep(1000); in the source that was removed.
2	Frontend was unable to access backend due to Cross Origin Resource Sharing permissions	1	Had to modify CORS registry of the spring api to include all routes. This implementation was done in Application.java and EngineController.Java
3	/windowInit endpoint was posting ships	1	Ship.java constructor

	/topic/windowInitResponse with all coordinates (0,0).		not implemented.