**Phase 2**

**Defect Log (Higher-Order Testing)**

**Team 21**

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| Defect No. | Defect Description | Defect Severity | Type of  Higher-Order  Testing | Test Case No. or Description |
| 1 | When playing against 2 enemies, minor lag occurs when the other enemies make their moves | 2 | Performance | Enemy moves have a latency of around 160 ms (100 ms being standard cap for user irritability) when auditing performance. |
| 2 | The assets in the game will not size themselves correctly for the viewport if playing in a smaller window. | 1 | Usability | Playing the game in small window size, such as half the screen resolution, prevents certain assets from being seen. |
| 3 | This app uses soon-to-be deprecated JavaScript functionality, which could lead to security issues in the long run. | 2 | Security | Chrome Console Output:  [Deprecation]  Element.createShadowRoot is deprecated and will be removed in M73, around March 2019. Please use Element.attachShadow instead. |
| 4 | The app allows multiple instances to be logged in on the same account. | 1 | Security | The app will allow you to sign in on two different windows |
| 5 | Having multiple instances open stops user from beginning a new game | 1 | Security | If two different instances are open and one of them does not have all their ships placed and poised for a new game. When begin game is pressed. The instance that is poised and begins a game will get a broken game screen. |
| 6 | Having multiple instances open causes game to share game data | 1 | Security | If two different instances are open and both are poised to start a new game (all ships are placed). If one presses begin game they both load up with their ships as placed. All actions submitted, from either instance, are shared between them. |
| 7 | Clicking the logout button does not immediately logout a user | 1 | Security | After pressing the logout button. The user is able to begin a new game and complete it. |
| 8 | Current game progress is lost if server goes down. | 1 | Recovery | If the server is shut down unexpectedly. After restart a game that was occuring cannot be played any further. |
| 9 | Cannot return to game if the browser window is closed | 1 | Recovery | If the browser window is closed the user is unable to return to the game. |
| 10 | To view the statistics page, you have to click on the settings link, and vice versa | 2 | Usability | The links for settings and statistics are switched |
| 11 | Can’t login using a different account | 2 | Usability | Since the app does not let you log out, you cannot log back in using a different account. |
| 12 | The color of your ships on the game grid are red, the same color as missed squares, potentially leading to confusion and losing track of ship positions. | 2 | Usability | Start new game and play for a few turns. Observe the colors of the grid squares in your grid. |
| 13 | When selecting which of your ships to move during the "move ship" action, all of your ships are colored the same color, this makes it difficult to discern adjacent ships apart from each other. | 2 | Usability | Place 2 or 3 of your starting ships horizontally in the same row. Start a new game and during your move, click on the "Move ship" command. Observe the colors on your grid. |
| 14 | Because of defects that only allow players to start the game with 2 opponents, the goal of allowing 1 opponent and 3 opponents is not met. | 1 | Facility | Start a new game, selecting 1, 2, or 3 for “# of opponents”. Regardless of choice, it will start the game with 2 opponents. |
| 15 | View Opponents Grid feature missing | 3 | Documentation | 55 |
| 16 | Create Strategy feature missing | 3 | Documentation | 56 |
| 17 | No Quit Game button with yes/no confirmation | 3 | Documentation | 57 |
| 18 | No View Results feature after game end | 3 | Documentation | 58 |
| 19 | Failed to “Create an easy-to-understand UI for players to interact with the game.” | 3 | Usability | Click to fire while in game doesn’t give understandable UI feedback |
| 20 | Failed to implement Non-functional requirement “Animation” | 3 | Usability | There are no animations in the app |
| 21 | Timer continues counting after the game ends | 2 | Usability | If the game timer option is selected, the timer will keep incrementing even after the game has ended |