**CS408: Break! Sprint 2 Design Inspection, Code Inspection, and Unit Testing**

Team 23: Akhil Agrawal, Jisoo Cha, Alex Geier, Shivan Desai, Youshin Kim

# 1. Code Inspection Defects

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| Author | Youshin Kim | | |
| Recorder | Akhil Agrawal | | |
| Moderator | Jisoo Cha, Alex Geier | | |
| inspector | Shivan Desai | | |
| Defect # | Description | Severity | How Corrected |
| 1 | Facebook authentication does not allow to link my account | 2 | Added App ID and App password in the Facebook developer setting |
| 2 | LeaderBoard did not show anything when no one played a game yet | 2 | Implemented functionality to alert a user that no one has played a game yet. |
| 3 | The user went to 404 error page when clicking profile page | 1 | fixed typo in URL that redirects to profile page |
| 4 | A game does not end even though the time is over | 1 | Implemented functionality to alert user the game ends and direct to the beginning when a user click ok |
| 5 | The user is allowed to create multiple users with the same email | 1 | Since we set the option for creating an account in Firebase, changed the setting in Firebase to make sure a user can’t use duplicated email. |
| 6 | When the player has more than one ball, all balls are released at the same time when the user clicks a point on the canvas. | 2 | Added code to delay the release of subsequent balls per round. |
| 7 | In a few occurrences, while playing the game, a few balls keep bouncing back and forth on the same horizontal plane on the top of the game canvas. | 2 | Added a check in the code to make sure the ball does not stay in the same horizontal plane after hitting the sides of the canvas more than once. |
| 8 | When a user logs in, an alert shows up with the user id and password in plain text. | 3 | Removed code which was displaying the password in plain text. |
| 9 | Balls are released at different speeds depending on the distance of the mouse click from the balls. | 2 | Added code to keep the dx and dy constant with respect to each other. |
| 10 | When a user gets an extra ball, the extra ball appears directly on the ground instead of dropping down from it’s location in the brick row | 2 | Decreased the dy of the new ball. |
| 11 | When the ball hits the side of blocks, the ball goes through the block. | 2 | Fix the code for verifying if the ball hits the blocks. |
| 12 | When the leaderboard timer refreshes, the leaderboard contents are not deleted before new content is loaded into the leaderboard table. | 2 | Make sure to remove all old leaderboard entries before updating the leaderboard. |
| 13 | Facebook friends do not appear when choosing the “Friends leaderboard” option | 2 | Make sure to keep track of the user’s friends user\_ids and display those users’ scores on the leaderboard. |
| 14 | When changing the master volume, the music volume and sound effects volume would not change. | 2 | Forgot to update the volume of sound effects of music when the value of the master volume slider changed. |

# 2. Design Inspection Defects

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| Author | Akhil Agrawal | | |
| Recorder | Alex Geier | | |
| Moderator | Shivan Desai, Youshin Kim | | |
| inspector | Jisoo Cha | | |
| 3 | Logout button did not shown after user login | 1 | Fixed status when the user logged in, depends on the authentication from the Firebase |

# 3. Unit Testing Defects

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| Product | Customizing ball unit test | | |
| Date | 10/08/2018 | | |
| Author | Youshin Kim | | |
| Defect # | Description | Severity | How Corrected |
| 1 | A user should be able to change the color of a ball by editing hex-code between #000000 to #ffffff | 1 | Make a check to see if user’s input is legitimate by limiting it between #000000 to #ffffff |
| 2 | The user cannot unlock new ball colors | 1 | Update user’s play history by counts so a user can unlock more ball color when reaching a better score or play counts. |
| 3 | When a user changes the ball color, only a ball changed its color. | 2 | kept a input value to make all balls to be a color that user wants |

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| Product | Time mode unit test | | |
| Date | 10/12/18 | | |
| Author | Jisoo Cha | | |
| Defect # | Description | Severity | How Corrected |
| 1 | The clock timer gets faster as the user shoots the ball. | 1 | Fix the code for the shooting and the timer. |
| 2 | The ball does not shoot infinitely and not keep shooting. Looks like only shoot two balls but shoots 1000 balls. | 1 | Fix the code for the shooting the ball. |
| 3 | When the blocks hit the bottom of the game screen, the game does not end. | 1 | Add code for ending when the blocks hit the bottom of the game screen. |

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| Product | items unit test | | |
| Date | 10/10/18 | | |
| Author | Akhil Agrawal | | |
| Defect # | Description | Severity | How Corrected |
| 1 | A user should be able to have a item during playing game, but items are not generated while playing the game | 1 | Currently not fixed, need to add a function to generate item while generating blocks |
| 2 | each item should function as a description | 2 | Currently not fixed, and could not test. Need to fix defect # 1 first to test. |

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| Product | Leaderboards unit tests | | |
| Date | 10/11/18 | | |
| Author | Alex Geier | | |
| Defect # | Description | Severity | How Corrected |
| 1 | When the leaderboard timer refreshes, the leaderboard contents are not deleted before new content is loaded into the leaderboard table. | 2 | Make sure to remove all old leaderboard entries before updating the leaderboard. |
| 2 | When switching between friends leaderboard and global leaderboard, the refresh timer is reset and the leaderboards are updated instantly | 3 | Do not reset the timer when switching between leaderboard modes |

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| Product | Sound Options unit tests | | |
| Date | 10/10/18 | | |
| Author | Alex Geier | | |
| Defect # | Description | Severity | How Corrected |
| 1 | When updating the master volume slider by changing the master volume slider position, not all sound effect volumes are updated. | 2 | Make sure to keep track all the different audio files and update their volumes whenever the master volume changes. |
| 2 | When changing the sound effects volume or the music volume, their volume will change even if the master volume is set to 0. | 3 | Set the volume of sound sources to (master volume \* volume type multiplier) when updating their volume. |

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| Product | Logout unit testing | | |
| Date | 10/07/18 | | |
| Author | Shivan Desai | | |
| Defect # | Description | Severity | How Corrected |
| 1 | When user try to login after logging out, the website does not respond | 2 | Make sure that user successfully logs out before sending a user to the main page |
| 2 | When a user logs out, the website remains the information from the previous user | 2 | Make sure that user successfully logs out and refreshed with no authentication information |