

# Team 15 Design Inspection, Code Inspection and Unit Testing

## Project Name: Crater Clash!

Team : Brendan Raftery, Benjamin Loisch, Mangkorn Yuan, Conner Isaacs, Nada Alnoory

Severity: 1 = Less Severe, 4 = More Severe

## Design Inspection

|                  |  |          |   |
|------------------|--|----------|---|
| Product          | Crater Clash!  |          |   |
| Date             | 02/07/19   |          |   |
| Author           | Nada Alnoory   |          |   |
| Inspector        | Nada Alnoory, Ben Loisch   |          |   |
| Module Inspected | Highscores (scoreboard scene, getScores C# script)   |          |   |
| Defect #         | Description  | Severity | How Corrected   |
| 1                | Once the program runs, adding a new component to the scene using the C# script doesn't appear as expected. The new component fills up the entire screen and covers up all other components even though its width and height is much smaller than the canvas. | 2        | Noticed that what caused the problem is that the canvas and the new component had different scales. Fixed by making both scales equal to (1,1,1). |

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| Product | Crater Clash! |
| Date    | 02/08/19      |

| Author           | Ben Loisch  |          |   |
|------------------|---|----------|---|
| Inspector        | Ben Loisch, Nada Alnoory  |          |   |
| Module Inspected | In gameplay module during runtime in gameBoard c# script  |          |   |
| Defect #         | Description   | Severity | How Corrected   |
| 2                | Unit / base artwork sprites can cover up entire terrain tiles which prevents the user from seeing which tile they are on. | 1        | Make sure to keep unit size < tile size and also have sufficient transparency around the unit so as to see the terrain tile under it. |

## Code Inspection

| Product        | Crater Clash!  |          |   |
|----------------|--|----------|---|
| Date           | 02/07/19   |          |   |
| Author         | Conner Isaacs, Nada Alnoory  |          |   |
| Inspector      | Conner Isaacs, Nada Alnoory  |          |   |
| Code Inspected | Highscores (getScores c# script)   |          |   |
| Defect #       | Description  | Severity | How Corrected   |
| 1              | A possible indexOutOfBoundsException is present, because the person array is hardcoded to a size of 1000 people. | 4        | Fixed by writing a function to parse number of people before officially parsing the JSON to the array. Array.resize was then called to resize the |

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|   |   |   | person array to the appropriate size.                    |
| 2 | When trying to replace the rank textbox for a player with (int) rank value, the error "cannot implicitly convert type 'int' to 'string'" appears. | 4 | Using "ToString()" method after the int variable "rank". |

## Unit Testing

|           |   |          |  |
|-----------|---|----------|--|
| Product   | Crater Clash!   |          |  |
| Date      | 02/07/19  |          |  |
| Author    | Conner Isaacs, Nada Alnoory   |          |  |
| Inspector | Conner Isaacs, Nada Alnoory   |          |  |
| Unit      | Highscores  |          |  |
| Defect #  | Description   | Severity | How Corrected  |
| 1         | An IndexOutOfRangeException occurs if pressing the left arrow while on the first page of the highscores     | 4        | Fixed by putting in a check to make sure offset variable can't become less than 0  |
| 2         | Users can go to a completely blank page on the highscores by hitting the right arrow while on the last page | 1        | Fixed by putting in a check to make sure the offset + 10 (the next 10 scores) wasn't greater than the amount of players before increasing offset |

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| 3 | When viewing the final page of the highscores, the final score had a "}" trailing it. E.g. instead of "4", it showed "4}" | 1 | Fixed by making a substring of the final score before assigning its value in the textbox  |
| 4 | When viewing the highscores, only every other listing would have a score with it.   | 2 | Fixed by moving the person index incrementation to only after a score has been assigned.  |
| 5 | When the highscores are not multiple of 10 the last page show rows with rank but without score or user name (empty rows). | 1 | Add another comparison statement in the loop that checks if the rank is less than the number of highscores in the database. Otherwise it stops looping. |

| Product        | Crater Clash!   |          |  |
|----------------|---|----------|--|
| Date           | 02/07/19  |          |  |
| Author         | Ben Loisch  |          |  |
| Inspector      | Ben Loisch  |          |  |
| Code Inspected | gameBoard c# script, game logic                                 |          |  |
| Defect #       | Description   | Severity | How Corrected  |
| 2              | Raycast on click event for detecting mouse input not recognized | 3        | Added a "BoardLayer" layer to the board prefab, and also added a hitbox around the board prefab sprite to detect raycasts. |

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| 3 | When moving a prefab tile object, trying to do so using <code>prefabTile.position(x,y,z)</code> doesn't work.                | 3 | Instead use a different set method. Use <code>prefabTile.position = new Vector3f(x,y,z)</code>   |
| 4 | When selecting a tile unit then clicking on an empty space to move, tiles moves, but is unable to move to previous location. | 3 | <code>boardTileInstanceTypes</code> array was holding the previous "melee1" identifier tag and was not set to "empty" upon tile removal. Set tile to "empty" in <code>boardTileInstanceTypes</code> to fix it. |
| 5 | When selecting a tile unit then clicking on an empty space to move, tiles moves, but is unable to move to previous location. | 3 | <code>boardTileInstanceTypes</code> array was holding the previous "melee1" identifier tag and was not set to "empty" upon tile removal. Set tile to "empty" in <code>boardTileInstanceTypes</code> to fix it. |