**Test Case Template**

**For**

**Beta Game**

**Team Beta**

Samuel Ruiz

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Joel Muñoz

Jonathan George

Prativa Kafley

# 

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# Revision History

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| --- | --- | --- | --- |
| **Name** | **Date** | **Reason For Changes** | **Version** |
| Prativa Kafley | 7/29/2018 | **Created Test Case-001**-Add User Name, **Test Case-002**-Music for ‘Congratulations’ GUI window, and **Test Case-003**-Display Scoreboard | 1.0 |
| Joel Munoz | 7/29/2018 | Added test case 4 & 10 | 1.0 |
| Jonathan George | 7/29/2018 | **Added test case 6,7,9,11** | 1.0 |
| Gordon Man | 7/28/2018 | **Added test case 12,13 and table of contents** | 1.0 |
| Samuel Ruiz | 7/28/2018 | **Created Test Case-005** Game Information and **Test Case-008** Enemy Movement | 1.0 |

# Test Case-001

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| **Test Case #**:001 | **Test Case Name:**Add User Name |
| **System:** Beta Game | **Subsystem:** User Name |
| **Designed by:**  Prativa Kafley | **Design Date:**7/24/2018 |
| **Executed by:** Prativa Kafley | **Execution Date:** 7/24/2018 |
| **Short Description:** Test User Name gets added to the score text file or not. | |

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| **Pre-conditions for test case # 001:**   1. If the user/player is the first user of the Beta Game, score text file should be created by the application programmatically. But if the user/player is 2nd or later user/player of the game, there should be existing score text file. 2. The user/player has just finished playing the Beta Game with score within or greater than the 10th position score in the existing scoreboard. 3. The ‘ENTER YOUR NAME’ GUI window with the Text Field to enter User Name appears. |

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| Step | Action | Expected System Response | Pass/ Fail | Comment |
| 1 | Enter ‘Prativa’ | There will be ‘Prativa’ inside the Text Field | Pass |  |
| 2 | Click ‘OK’ button | The System will display another Confirmation GUI window that says “Confirmed!”. | Pass |  |
| 3 | Click ‘Yes’ button | The System will display another Congratulations GUI window that says “Congratulations, YOU ARE IN TOP 10 POSITION” | Pass |  |
| 4 | Click ‘OK’ button | The Congratulations GUI window will dispose | Pass |  |
| 5 | **post-condition 1** |  | Pass |  |
| 6 | In step 1, leave the Text Field empty (do not put anything in User Name text field) | Text Field will be empty | Pass |  |
| 7 | Click ‘OK’ button | The System will display another Invalid GUI window that says “Invalid!, User Name is Empty” | Pass |  |
| 8 | Click ‘OK’ button | The Invalid GUI window will dispose, and user/player will be taken back to the first window where user/player will be able to enter his/her username. | Pass |  |
| 9 | Enter ‘Jon’ | There will be ‘Jon’ inside the Text Field | Pass |  |
| 10 | Repeat step 2,3 and 4 | The Congratulations GUI window will dispose | Pass |  |
| 11 | **post-condition 2** |  | Pass |  |
| 12 | Repeat step 1, but enter ‘Ron’ | There will be ‘Ron’ inside the Text Field | Pass |  |
| 12 | Repeat step 2, but click ‘Cancel’ button in step 2. | The ‘ENTER YOUR NAME’ GUI window will dispose. | Pass |  |
| 13 | **post-condition 3** |  | Pass |  |
| 14 | In step 3, click ‘No’ button | The System will take back to the ‘ENTER YOUR NAME’ GUI window. | Pass |  |
| 15 | Edit name ‘Prativa’ to ‘PrativaKafley’ or change name to ‘Alex’ | ‘PrativaKafley’ or ‘Alex’ will be in the User Text field depending what user prefer to do. Edit or change User Name. | Pass |  |
| 16 | Repeat step 2,3,4 | The Congratulations GUI window will dispose | Pass |  |
| 17 | **post-condition 4** |  | Pass |  |
| 18 | Repeat step 1, 2 and 3, but enter ‘Dan’ in step 1. | There will be ‘Dan’ inside the Text Field | Pass |  |
| 19 | In step 3, click ‘Cancel’ button | Both ‘ENTER YOUR NAME’ window and the current ‘Confirmation’ window will dispose. | Pass |  |
| 20 | **post-condition 5** |  | Pass |  |

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| **Post-conditions for test case # 001:**  **1. The name ‘Prativa’ will be saved in the score text file.**  **2. The name ‘Jon’ will be saved in the score text file.**  **3. The name ‘Ron’ will not be saved in the score text file.**  **4. The name ‘PrativaKafley’ or ‘Alex’ will be saved in the score text file depending on what user/player decide to do whether to edit the name or change the name.**  **5. The name ‘Dan’ will not be saved in the score text file.** |

# Test Case-002

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| **Test Case #**:002 | **Test Case Name:**Music for ‘Congratulations’ GUI window. |
| **System:** Beta Game | **Subsystem:** ‘Congratulations’ GUI window |
| **Designed by:**  Prativa Kafley | **Design Date:** 7/28/2018 |
| **Executed by:** Prativa Kafley | **Execution Date:** 7/28/2018 |
| **Short Description:** Test music plays on display of ‘Congratulations’ GUI window | |

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| **Pre-conditions for test case # 002:**   1. There should be music file with name ‘Congratulations.wav’ stored in Beta Game program folder. Extension of the file cannot be altered from ‘.wav’. 2. The user is in ‘Confirmation’ GUI window. |

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| Step | Action | Expected System Response | Pass/ Fail | Comment |
| 1 | Click “Yes” button | The ‘Congratulation’ GUI window will display | Pass |  |
| 2 | **post-condition 1** |  | Pass |  |
| 3 | Click ‘OK’ button | The ‘Congratulation’ GUI window disposes. | Pass |  |
| 4 | **post-condition 2** |  | Pass |  |

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| **Post-conditions for test case # 002:**  **1. Music with name Congratulations.wav plays.**  **2. Music played in post-condition 1 stops playing.** |

# Test Case-003

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| **Test Case #**:003 | **Test Case Name:**Display Scoreboard |
| **System:** Beta Game | **Subsystem:** Score Board |
| **Designed by:**  Prativa Kafley | **Design Date:** 7/10/2018**,** 7/24/2018 |
| **Executed by:** Prativa Kafley | **Execution Date:** 7/24/2018 |
| **Short Description:** Test if score Board displays or not. | |

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| **Pre-conditions for test case# 003:**   1. The System should create score text file in the Beta Game program folder. 2. The user is in the main menu window. |

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| Step | Action | Expected System Response | Pass/ Fail | Comment |
| 1 | Click “High Score” button in the menu window. | A Score Board window should pop-up with columns rank, score and name with rank, name and score of the user/player in each column. | Pass |  |
| 2 | **post-condition 1** |  | Pass |  |
| 3 | Repeat step 1, and click ‘OK’ | Scoreboard window disposes. | Pass |  |
| 4 | **post-condition 2** |  | Pass |  |

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| **Post-conditions for test case # 003:**  **1. Scoreboard window displays.**  **2. Scoreboard window disposes.** |

Test Case-004

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| **Test Case #**:00 4 | **Test Case Name:** credits page |
| **System:** Beta Game | **Subsystem:** Game information |
| **Designed by:**  Joel Munoz | **Design Date:** 7/25/20218 |
| **Executed by:** Joel Munoz | **Execution Date:** 7/27/2018 |
| S Short Description: credits pages will display specific fonts and size for text, and images will be dis displayed at certain coordinates on the Jframe window. | |

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| **Pre-conditions for test case # 004:**  1. User opens Beta game application  2. User clicks credits button from Main Menu |

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| Step | Action | Expected System Response | Pass/ Faifl | Comment |
| 1 | Pre-condition 1 | Beta Game opens up to main menu | pass |  |
| 2 | Pre-condition 2 | Credit on menu screen works | pass |  |
| 3 | Images /  text displayed | Credits data generates onto  the screen | pass |  |
| 4 | Post-condition 1 | Jframe window terminates | pass |  |
| 5 | Post-condition 2 | Back button returns user  to main menu. | pass |  |

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| **Post-conditions for test case # 004:**  **1 .** user terminates window session  **2 .** user clicks back button and returns to the main menu |

# Test Case-005

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| **Test Case #**: 005 | **Test Case Name:**Display Game Information (life bar, score, and timer) |
| **System:** Beta Game | **Subsystem:** Game Information |
| **Designed by:**  Samuel Ruiz | **Design Date:** 7/29/2018 |
| **Executed by:** Samuel Ruiz | **Execution Date:** 7/29/2018 |
| **Short Description:** Displays scores the life of the player object, timer, and score to the user. | |

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| **Pre-conditions for test case # 005:**   1. In order to display the life bar, timer and score the user has to already clicked the button “Play” (an option from the menu) and the game must be in gamestate “play”. 2. The user must be playing the game in order to update and display the timer, life, and score. If the user is not playing the game because timer or life reaches 0, then the timer, life and score will not display. |

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| --- | --- | --- | --- | --- |
| Step | Action | Expected System Response | Pass/ Fail | Comment |
| 1 | User clicks the “Play” option from the main menu. | The player’s life, timer and score will be display on the screen. | Pass | The timer will be set to 5 minutes, life bar will be set to 250 pts, and the score will be set to 0 pts. |
| 2 | Player’s life decrease because an enemy collision. | For every collision with an enemy the player’s life decreases by the amount of damage the enemy makes. | Pass | If the player gets hit by an enemy bullet or an enemy itself then the life will decrease by 5pts.  If the player’s life reaches zero, then display message “Game Over” and don’t allow user to use controller. |
| 3 | Increase score because player destroyed enemy. | Increase score and display updated score to the user every time an enemy is destroyed. | Pass | If an enemy is destroyed increase the score by the amount of points that the enemy is worth (5, 10, 20 pts etc.). |
| 4 | Timer countdown every seconds during the game. | The timer decrease until timer is zero. The timer is continually been updated and displayed to the user. | Pass | If the time countdown reaches zero, then display message “Game Over” and don’t allow user to use controller. |

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| **Post-conditions for test case # 005:**   1. If gamestate is “game over”, then stop updating the life, timer and score of the player.   2. If the user’s score is among the top ten, then ask the user for its name.  3. If the user’s score is not among the top ten, the don’t ask the user of its name. Give the options to “Retry” or go back to “Menu.” |

# Test Case-006

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| **Test Case #**:006 | **Test Case Name:** Buttons for player object movement. |
| **System:** Beta Game | **Subsystem:** Game Object |
| **Designed by:**  Jonathan George | **Design Date:** 7/28/2018 |
| **Executed by:** Jonathan George | **Execution Date:** 7/28/2018 |
| **Short Description:** Test if player object render() is updating x,y coordinate location to be rendered on the screen once keyboard input is executed during game play. | |

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| **Pre-conditions for test case # 006:**  1.There should be keyboard input class completed  2. Play button in game menu needs to have executed gamestate to “play”  3. New player object must be created. |

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| Step | Action | Expected System Response | Pass/ Fail | Comment |
| 1 | Press(or hold) “W” key | W set to true | Pass | Key has been pressed and held  Message will repeat several times because of the game loop |
| 2 | Release “W” key | W set to false | Pass | Key has been released after being pressed |
| 3 | **post-condition 1** |  | Pass |  |
| 4 | Press(or hold) “S” key | S set to true | Pass | Key has been pressed and held    Message will repeat several times because of the game loop |
|  | Release “S” key | S set to false | pass | Key has been released after being pressed |
| 5 | **post-condition 2** |  | Pass |  |
| 6 | Press(or hold) “A” key | A set to true | pass | Key has been pressed and held    Message will repeat several times because of the game loop |
| 7 | Release “A” key | A set to False | pass | Key has been released after being pressed |
| 8 | **post-condition 3** |  |  |  |
| 9 | Press(or hold) “D” key | D set to true | pass | Key has been pressed and held    Message will repeat several times because of the game loop |
| 10 | Release “D” key | D set to false | pass | Key has been released after being pressed |
|  | **post-condition** |  | pass |  |

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| **Post-conditions for test case # 006:**  **1 .** player object should stop movement(x,y coordinates should no longer be updating) So the last r recorded x,y update will be where render() renders the player object until keyboard input is done. |

# Test Case-007

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| **Test Case #**:007 | **Test Case Name:** Buttons for player object bullet fire |
| **System:** Beta Game | **Subsystem:** GameObject |
| **Designed by:**  Jonathan George | **Design Date:** 7/28/2018 |
| **Executed by:** Jonathan George | **Execution Date:** 7/28/2018 |
| **Short Description:** Test if bullet object is created when “space” is pressed by user. Test to see if bullet object is rendered from player objects location when button is pressed. Test to see if bullet object moves as predicted. | |

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| **Pre-conditions for test case # 007:**  1.There should be keyboard input class completed  2. Play button in game menu needs to have executed gamestate to “play”  3. New player object must be created. |

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| --- | --- | --- | --- | --- |
| Step | Action | Expected System Response | Pass/ Fail | Comment |
| 1 | Press(or hold) ‘space” key | space set to true | Pass | Key has been pressed and held  Message will repeat several times because of the game loop |
| 2 | Release “space” key | “Space” set to false | Pass | Key has been released after being pressed |
| 3 | **post-condition 1** |  | Pass |  |
| 4 | Bullet object created once “space”set to true  Added to link list | Bullet count = x. | Pass | Bullets are being updated |
| 5 | **post-condition 2** |  | Pass |  |
| 6 | Render bullets to screen | If you can visually see the bullets to screen then this test is good enough for a pass | pass | Not possible to tell if all bullets are being rendered. |
| 8 | **post-condition 3** |  |  |  |
| 9 | Rendered bullets are updating and moving is the desired direction | Change the velX or velY or both to different values to visually see if the bullet move if different directions  System out will display the desired desired coordinate update | pass | Visually we should see the bullets move or update and redraw as part of the game loop |
|  | **post-condition 4** |  | pass |  |

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| **Post-conditions for test case # 007:**   1. Bullets should not fire if ‘space’ key isn't being pressed   2. Bullets should still move in desired direction even after space key has be released.  3. Objects should still exist even if they leave the screen |

# Test Case-008

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| **Test Case #**: 008 | **Test Case Name:** Enemy moving direction on and appearance on the screen. |
| **System:** Beta Game | **Subsystem:** Enemy Movement |
| **Designed by:**  Samuel Ruiz | **Design Date:** 7/29/2018 |
| **Executed by:** Samuel Ruiz | **Execution Date:** 7/29/2018 |
| **Short Description:** Displays the enemies on the screen and their movement. | |

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| **Pre-conditions for test case # 008:**   1. In order to display enemies on the screen the user has to already clicked the button “Play” (an option from the menu) and the game must be in gamestate “play”. 2. The user must be playing the game in order to update and display the timer, life, and score. If the user is not playing the game because timer or life reached zero, then enemies will not be display. |

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| --- | --- | --- | --- | --- |
| Step | Action | Expected System Response | Pass/ Fail | Comment |
| 1 | User clicks the “Play” option from the main menu. | The enemies will immediately appear on the screen. | Pass | Enemies could start shooting or collide with the player. |
| 2 | Enemies movement | Enemies will move in different direction depending on what type of enemy it is. | Pass | Depending on the enemy the movement could be either up and down, left and right, or in a circle motion. |
| 3 | Enemy destroyed | If an enemy is destroyed they will be removed from the display and they will be no longer in motion. | Pass |  |

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| **Post-conditions for test case # 008:**   1. Enemies will continue to move on the screen up and down, left and right, or in a circle motion as long there are not destroyed by the player. 2. Enemies will shoot bullets at the player while moving. |

# Test Case-009

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| **Test Case #**:009 | **Test Case Name:** player restricted movement to game window |
| **System:** Beta Game | **Subsystem:** GameObject |
| **Designed by:**  Jonathan George | **Design Date:** 7/29/2018 |
| **Executed by:** Jonathan George | **Execution Date:** 7/29/2018 |
| **Short Description:** Test that the player object won't leave the screen. Set VelX and VelY variables to 0 if object touches the edge of the screen. | |

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| **Pre-conditions for test case # 009:**   1. Window needs to be created 2. There should be keyboard input class completed   3. Play button in game menu needs to have executed gamestate to “play”  4. New player object must be created. |

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| --- | --- | --- | --- | --- |
| Step | Action | Expected System Response | Pass/ Fail | Comment |
| 1 | Press and hold ‘W’ key until player object is stationary at the top of the game window, or moved passed the window | Visually we should see the object no longer moving upwards, or passed the window.  System should display Y = 0 | Pass | Works like a charm |
| 3 | **post-condition 1** |  | Pass |  |
| 4 | Press and hold ‘S’ key until player object is stationary at the bottom of the game window, or moved passed the window | Visually we should see the object no longer moving downwards, or passed the window.  System should display Y = game windows height | Fail | Object is leaving the screen… but seems to pop back up as soon as i press “W”  This didn't happen in prototyping.. |
|  | Re do test with fixes to code  if(y >= GameLooper.HEIGHT - 62){  y = GameLooper.HEIGHT - 62; | Visually we should see the object no longer moving downwards.  System should display Y = 0 | Pass | Had to update when the VelY needed to be set to 0. Sense objects are drawn from the top left corner, the object x,y coordinates need to be offset to the object's height relative to the window height. |
| 5 | **post-condition 2** |  | Pass |  |
| 6 | Press and hold ‘A’ key until player object is stationary to the left of the game window, or moved passed the window | Visually we should see the object no longer moving to the left, or passed the window.  System should display X = 0 | PASS |  |
| 8 | **post-condition 3** |  |  |  |
| 9 | Press and hold ‘D’’ key until player object is stationary to the right of the game window, or moved passed the window | Visually we should see the object no longer moving to the right, or passed the window.  System should display x = game windows width | fail | Object is leaving the screen… but seems to pop back up as soon as i press “S” |
|  | Re do test with code fix  if (x >= GameLooper.WIDTH - 38){ x = GameLooper.WIDTH - 38;  } | Visually we should see the object no longer moving to the right or passed the window. .  System should display x = game windows width | pass | Had to update when the VelX needed to be set to 0. Sense objects are drawn from the top left corner, the object x,y coordinates need to be offset to the object's width relative to the windows width. |
|  | **post-condition 4** |  | pass |  |
|  | Freely move around the edges of the window using “W,S,A,D” keys  To make sure object doesn't leave the window | Visually we should see the object no longer moving passed the window.  System should display velx = 0  Or velY = 0 depending on where the object is. Literal corner case is if the object is in the corner, Velx and VelY should output 0. | Pass |  |

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| **Post-conditions for test case # 009:**  **.** player object should stop movement(x,y coordinates should no longer be updating) So the last r recorded x,y update will be where render() renders the player object until keyboard input is done. |

# Test Case-010

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| **Test Case #**: 010 | **Test Case Name:** Help page |
| **System:** Beta Game | **Subsystem:** Game Information |
| **Designed by:**  Joel Muñoz | **Design Date:** 7/25/2018 |
| **Executed by:** Joel Muñoz | **Execution Date:** 7/27/2018 |
| **Short Description:** Generates **Beta** **Games** asset, along with a visual representation and detailed information on how each game asset works. | |

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| **Pre-conditions for test case # 010:**   1. User opens game application 2. Menu shows up on screen 3. User clicks the button for the *Help* page |
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| Step | Action | Expected System Response | Pass/ Fail | Comment |
| 1 | Pre-condition 1 | Beta Game application opens | pass |  |
| 2 | **pre -condition 2** | Menu is displayed, with all buttons | pass |  |
| 3 | Pre-condition 3 | Help page button is pressed | pass |  |
| 4 | Help Page is generated | Images/text of help page is displayed on the screen in proper coordinates | pass | Need to up date enemy content |
| 5 | Post condition 5 | User terminated JFrame window | pass |  |
| 6 | Post condition 6 | User clicks back button to return to main menu | fail | Button isnt working, partner with gordan to get this working |
| 7 | Post condition 6 | User clicks back button to return to main menu | pass | Button works now |

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| **Post-conditions for test case # 010:**   1. User terminates windows 2. User clicks back button to return to main menu |

# Test Case-011

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| **Test Case #**:011 | **Test Case Name:** player restricted movement to game window |
| **System:** Beta Game | **Subsystem:** GameObject |
| **Designed by:**  Jonathan George | **Design Date:** 7/29/2018 |
| **Executed by:** Jonathan George | **Execution Date:** 7/29/2018 |
| **Short Description:** Test that the player object won't leave the screen. Set VelX and VelY variables to 0 if object touches the edge of the screen. | |

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| **Pre-conditions for test case # 011:**   1. Window needs to be created 2. There should be keyboard input class completed   3. Play button in game menu needs to have executed gamestate to “play”  4. New player object must be created. |

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| --- | --- | --- | --- | --- |
| Step | Action | Expected System Response | Pass/ Fail | Comment |
| 1 | Press and hold ‘W’ key until player object is stationary at the top of the game window, or moved passed the window | Visually we should see the object no longer moving upwards, or passed the window.  System should display Y = 0 | Pass | Works like a charm |
| 3 | **post-condition 1** |  | Pass |  |
| 4 | Press and hold ‘S’ key until player object is stationary at the bottom of the game window, or moved passed the window | Visually we should see the object no longer moving downwards, or passed the window.  System should display Y = game windows height | Fail | Object is leaving the screen… but seems to pop back up as soon as i press “W”  This didn't happen in prototyping.. |
|  | Re do test with fixes to code  if(y >= GameLooper.HEIGHT - 62){  y = GameLooper.HEIGHT - 62; | Visually we should see the object no longer moving downwards.  System should display Y = 0 | Pass | Had to update when the VelY needed to be set to 0. Sense objects are drawn from the top left corner, the object x,y coordinates need to be offset to the object's height relative to the window height. |
| 5 | **post-condition 2** |  | Pass |  |
| 6 | Press and hold ‘A’ key until player object is stationary to the left of the game window, or moved passed the window | Visually we should see the object no longer moving to the left, or passed the window.  System should display X = 0 | PASS |  |
| 8 | **post-condition 3** |  |  |  |
| 9 | Press and hold ‘D’’ key until player object is stationary to the right of the game window, or moved passed the window | Visually we should see the object no longer moving to the right, or passed the window.  System should display x = game windows width | fail | Object is leaving the screen… but seems to pop back up as soon as i press “S” |
|  | Re do test with code fix  if (x >= GameLooper.WIDTH - 38){ x = GameLooper.WIDTH - 38;  } | Visually we should see the object no longer moving to the right or passed the window. .  System should display x = game windows width | pass | Had to update when the VelX needed to be set to 0. Sense objects are drawn from the top left corner, the object x,y coordinates need to be offset to the object's width relative to the windows width. |
|  | **post-condition 4** |  | pass |  |
|  | Freely move around the edges of the window using “W,S,A,D” keys  To make sure object doesn't leave the window | Visually we should see the object no longer moving passed the window.  System should display velx = 0  Or velY = 0 depending on where the object is. Literal corner case is if the object is in the corner, Velx and VelY should output 0. | Pass |  |

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| **Post-conditions for test case # 011:**  **.** player object should stop movement(x,y coordinates should no longer be updating) So the last r recorded x,y update will be where render() renders the player object until keyboard input is done. |

# Test Case-012

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| **Test Case #**: 012 | **Test Case Name:** bullet collision |
| **System:** Beta Game | **Subsystem:** bullet class, GameObject, ObjectManager |
| **Designed by:**  Jonathan George | **Design Date:** 7/29/2018 |
| **Executed by:** Jonathan George | **Execution Date:** 7/29/2018 |
| **Short Description:** delete object from list, and cease to render object to screen once collision with object or game window | |

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| **Pre-conditions for test case # 012:**   1. Window needs to be created 2. Need to select start in game menu 3. Player object needs to be created 4. Player needs to press or hold “space” key 5. Bullet object needs to be created 6. Game objects need to be created for bullets to hit. |

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| --- | --- | --- | --- | --- |
| Step | Action | Expected System Response | Pass/ Fail | Comment |
| 1 | Press “space” key  When player object is aligned vertically with any other game object | Should see bullet fire towards object from player object. Once bullet touches game object the bullet should cease to be rendered from screen.  System should display one less object in the linklist. | pass | if(getBounds().intersects(tempObject.getBounds())){  om.removeObject(this); works just fine |
| 2 | **Post condition 1** |  | pass |  |
|  | **P**ress “space” key when player object is vertically aligned without obstruction to the top of the window. **(there is nothing in the way of the play and the top of the game window)** | Should see bullet fire towards the top of the window. Once bullet touches the window the bullet should cease to be rendered from screen.  System should display one less object in the linklist. | pass | if (y <= 0) { // this y is the bullets y coordinate  om.removeObject(this); |

|  |
| --- |
| **Post-conditions for test case # 012:**  Bullets that hit the edge of the window or gameobject should no longer exist. |

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# Test Case-013

Design Date: 28/7/2018

**Title:** Back Buttons – Button that allow users to navigate back to the Menu from any page except for the game play page.

**Description:** A player should be able to navigate to different pages from the menu via buttons, and at the newly loaded pages, there should be a button that takes you back to the menu if clicked. (help, credits and high score page are the only ones to be testing the back button)

**Precondition:** the user must have the game downloaded onto the computer to launch the game, have the menu load up, and click either the Help, High Score or Credits button to navigate to a separate page. Then the user should see a button with a label “Back” to be able to navigate back to the menu page.

**Assumption:** the computer has Java installed, menu is displaying the correct content onto the game window and buttons in the menu are functioning properly.

Test Steps:

1. Launch the app after installing.

2. Click on the help button.

3. Once the help page has been displayed, locate and click on the back button to see if the Menu is loaded back up onto the game window.

4. Once back to the Menu page, click on High Score button.

5. Once on the high score page, locate and click the back button to check if the Menu page is loaded back up onto the game window.

6. Once back to the menu page, click on the Credits button.

7. Once on the Credits page, locate and click the back button to check if the Menu page is loaded back onto the game window.

**Expected Result:** A game window should populate when the game is launched, and inside the game window, a menu should be displayed. If the user clicks either the help, high score, or credits button, their respective page contents should be displayed on the game window. On either one of these pages, there should also be a button labeled “Back” to where if the user clicks it, the game window should display the Menu again.

# Test Case-014

Design Date: 28/7/2018

**Title:** Menu Page – Display buttons for user to navigate to different game states.

**Description:** A player should be able to see the menu that renders 5 buttons to the game window (Play, Help, Credits, High Score, and Quit) that will populate different content depending on which button is clicked.

**Precondition:** the user must have the game downloaded onto the computer to launch the game and populate menu.

**Assumption:** the computer has Java installed.

**Test Steps:**

1. Launch the app after installing.

2. Click on the Play button to see if the content for actual gameplay is rendered onto the game window. If it is working correctly, close the app.

3. Re-open the app and click the Help button to see if the game window populates a page with instructions on how to play the game (which is the help page). Close the app if it is working properly.

4. Re-open the app and click the High Score button to see if the high scores are populated onto the game window. Close the app if working properly.

5. Re-open app and click the Credits button to see if the credits are populated onto the game window. Close the app if working properly.

6. Re-open app and click the Quit button to see if the game window closes.

**Expected Result:** A game window should populate when the game is launched, and inside the game window should be a black background with 5 blue buttons such as the picture below. The buttons when clicked, should each render on the game window specific content.

