Unit and Black box test

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Testing type: Unit test

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| **Unit Testing** | | | | | | |
| # | Test Case | Input | Expected output | Actual Output | Evidence | Pass/ Fail |
| 1 | Checking long delay between iteration | Change delaybetweenIterations to 5000 milliseconds | The iteration will have a 5 second delay | The iteration had a 5 second delay |  | Pass |
| 2 | Checking normal delay between iteration | Change delaybetweenIterations to 1000 milliseconds | The iteration will have a 1 second delay | The iteration had a 1 second delay |  |  |
| 3 | Displaying matrix on screen | Utilise the display appDisplay function to display grid | The empty cells coloured white and the live cell which are coloured pink must show on screen. | The empty cells coloured white and the live cell which are coloured pink are shown on screen. |  | Pass |
| 4 | Saving Matrix into a file | Use the function called saveMatrix to save a matrix to a ‘JSON’ file | The screen should display “Current State Saved”  Console should print what is saved in Jason file | “Current State Saved” is displayed  Console prints what is saved in Jason file |  | Pass |
| 5 | Loading Matrix from saved file | Use the loadMatrix function to load the saved matrix into game | Saved matrix should show on screen | Saved matrix is shown on screen |  | Pass |
| 6 | Randomly generating matrix | Use function fillMatrix to load initial matrix with 0 or 1 randomly. | Matrix in screen should show random generate points | Matrix in screen shows random generate points |  | Pass |
| Black Box Testing | | | | | | |
| # | Test Case | Description | Expected Result | | Actual result and Evidence | Pass/ Fail |
| 1 | Start State User choice | Allow a user to choose between a random start state, loaded start state and a user-input start state | Should have buttons for users to choose which start state they want | |  | Pass |
| 2 | Stopping simulation | Allow a user to the simulation | Have a pause button that stops the simulation | |  | Pass |
| 3 | Restarting simulation | Allow a user to pause and restart a simulation | Once the simulation has started and is paused a button to go back to initial state should be present | |  | Pass |
| 4 | Saving state | Allow a user to save the current state of a simulation | Have a button to save appear when simulation is paused so that its state can be saved | |  | Pass |
| 5 | Adjusting simulation speed | Allow a user to adjust the iteration speed | All the user a set of simulation speed they can choose from | |  | Pass |
| 6 | User Input grid | Allow a user to input the initial state of a simulation | Have a blank matrix on screen in which the user can tap to fill in the cell | |  | Pass |