Automata Simulation Black Box Test Plan

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Introduction

The following Black Box Tests test the functionality of the Automata Simulation program to ensure that it follows the requirements set by the client. This will test both invalid inputs as well as valid inputs.

To start the program, right click on the SimulationGUI class and click **Run > Java Application**. You can specify a specific ecosystem file in the command arguments to load into the system.

Test ID	Description	Expected Results	Actual Results
Test 1 Invalid file kbunker (author)	**Preconditions: "**test-files/missing_file.txt" does not exist Run the program, choosing the file "test-files/missing_file.txt" as the ecosystem file to load. *Check Results* Click **OK**	A dialog box displaying an error message "File required to initialize the ecosystem." appears	A dialog box displaying an error message "File required to initialize the ecosystem." appears
Test 2 No given file Kbunker	**Preconditions:** none Run the program without adding a ecosystem file for the program to run *Check Results* Click **OK**	A dialog box displaying "File required to initialize the ecosystem."	A dialog box displaying "File required to initialize the ecosystem."
Test 3 Default configuration Kbunker	**Preconditions:** none Run the program with the file "test-files/ecosystem_test.txt" *Check results* Click **Quit**	An ecosystem grid is displayed with default color values and the animals have the default values for steps. The program exits	An ecosystem grid is displayed with default color values and the animals have the default values for steps. The program exits
Test 4 Custom configuration Kbunker	**Precondtions:** none Run the program with the file "test-files/test_ecosystem.txt" for the ecosystem file and the file "test-files/test_configuration.txt" *Check results*	An ecosystem grid is displayed with red as the lowest level color, green as the middle level color, and green as the high level blue.	An ecosystem grid is displayed with red as the lowest level color, green as the middle level color, and green as the high level blue.

	Click **Quit**		
Test 5 Run simulator Kbunker	**Precondtions:** test 4 has passed Enter 1 into the Number of steps to run: blank and click **Run** *Check results* Close the program	There should have been movement of some sort on the grid (currently just verify that something happened when the button was pressed) the Total steps counter should now read 1.	There should have been movement of some sort on the grid (currently just verify that something happened when the button was pressed) the Total steps counter should now read 1.

Document Revision History

Date	Author	Change Description
09/22/16	Kbunker	• Wrote the 5 tests
10/14/16	Kbunker	• Ran the BB tests