

Defects Found & Corrected From Black Box Testing

Defect #	Defect	How To Correct	Module	Severity (S1, S2 or S3)
1	In the options menu, the Cancel button does not do anything on mouse click.	Implement functionality to the cancel button when called	Menu	S3
2	Current Mouse Color is set to black, but actual color is red.	Set the default mouse color to red, or change the indicator to black	Menu	S3
3	In the options menu, if a change is made, and the 'Accept' button is pressed four times, the survival rules all become unselected.	Rework the change functionality so that when accepted, it is permanent.	Menu	S3
4	In the options Menu, the 'Accept' button does not highlight unless a change to the survival rules are changed.	Allow highlight for any changes inside the menu, not just the "survival" rules.	Menu	S2
5	After a set amount of generations, the board is cleared. The cause of this is not apparent	Rework generation so that there is a track across generations. this will help prevent the error	Menu	S1
6	The "Create in bulk" button is either not bound to the ctrl key or is broken	bind the create in bulk button (also, it would probably be better to bind it to a key other than ctrl)	ConwayGame	S2
7	In the options menu, if the number of threads is given blank input, the ruleset becomes corrupt/invalid.	have a basic error pop up upon invalid input attempt	Menu	S1
8	Clicking at (X,Y>0) places a box at (X,Y-1) with a one-pixel offset up	Use an if statement that checks if the Y coordinate of a click is > 0. If true, then add 1 to the Y coordinate.	GUI	S1
9	Clicking at (X<0,Y) places a box at (X+1,Y)	Use an if statement that checks if the X	GUI	S1

		coordinate of a click is < 0 . If true, then subtract 1 from the X coordinate.		
10	If the number of cells become arbitrarily large, say half the screen is filled, the entire application lags almost to a standstill. (Regardless of number of threads)	Use a quadrant based divide-and-conquer algorithm with multiple threads.	Controller	S2
11	Every now and again the project does not register an enter keypress. Causing auto play to be unaccessible.	Synchronize all the game variables accessed by multiple threads in the KeyEvent.VK_ENTER keypress event.	Input	S1
12	If the enter key is pressed and then the spacebar is pressed. the functionality of the enter key is changed to that of the space key	Change the functionality of the Enter key to be start/stop and not revert to step.	Controller	S2
13	Instructions describing the controls for the application contained within a text field are editable	Set instructionTextField.setEditable(false);	GUI	S3
14	The Home button does center the screen, but it resets the zoom of the screen	On Home button press, set view coordinates to width/2 and height/2.	Controller	S3
15	The hide button doesn't hide the menu like stated	Implement a case in keyPressed for VK_X that sets the visibility of the menu to false	Input	S2
16	Pressing the delete key clears all the cells on the screen and this functionality is not documented or listed as a HotKey.	Document/list this function as a HotKey	GUI	S3
17	After selecting a file to insert via INSERT, there is no way of removing the "ghost" of the selected file	Add constant 1x1 pattern to ConwayPattern.java and set the pattern to it when a key is pressed	Pattern	S1

18	When Attempting to change the location of the screen via TAB, the grid doesn't hide	Add keyPressed case for VK_TAB which toggles a boolean, which controls whether the grid is drawn	Input	S2
19	The "current mouse color" text overlaps with the "hashing" text in the status bar	Increase the X/Y values in the call to page.drawString	GUI	S3
20	In the options menu, the input boxes cannot handle integers that are larger than the maximum value for an Integer (2,147,483,647).	Verify that the input is within int range before accepting; otherwise display an error GUI window.	GUI	S2
21	In the options menu, the input boxes cannot handle invalid integers that begin with 0 such as 0678.	Add a loop that truncates the first character of the string while str.charAt(0)=='0'	GUI	S2

Defects Found & Corrected From White Box Testing

Defect #	Defect	How To Correct	Module	Severity (S1, S2 or S3)
1	Horizontal and Vertical Crossline are not filled	Make a loop after checking if the user wanted to view the grid lines. The loop will iterate Vertically/Horizontally and will fill the page color to the desired color.	drawGame()	S3
2	Page not redrawn after GUI change	After all changes to the gui, redraw the game and then return from drawGame()	drawGame()	S2
3	Cell count is not checked during the checking during evalPoint()	include an if statement to check and mark null cells if the count is to high	evalPoint()	S1
4	Invalid input not handled in the "generations to hash" input dialogue on F4 key press.	Surround the integer parsing with a try catch block and catch a NumberFormatException. Set hashing to false in this catch block.	KeyEvent.VK_F4	S2
5	The options menu is shown whether the game is paused or not.	if !_game.paused, then don't show the options menu.	KeyEvent.VK_ESCAPE	S3
6	Instructions describing the controls for the application	Set instructionTextField.setEditable(false);	GUI	S3

	contained within a text field are editable			
7	Options dialog isn't populated with current values	Add setValue calls in showOptions.	GUI	S1
8	hideOptions is empty	run setVisible(false)	GUI	S2
9	initialize doesn't correctly set default options	run resetToDefault() in ConwayOptionGUI. initialize()	GUI	S1
10	readFromFile() doesn't check if the input file is a valid length	if fileLineCount on the file doesn't return 4 or 5, display an error	I/O	S2
11	Confirm button is not disabled if rule set or thread count is invalid	Disable the confirm button if an invalid setting is entered	GUI	S2
12	Listeners are not removed before programmatically deselecting options checkboxes	Disable the listeners on the checkboxes before deselecting them and reenale them afterwards.	GUI	S2
13	Confirm button is not enabled when threads are set	If the thread input is valid, return true	GUI	S1
14	Target FPS is set to the valid specified in options before the confirm button is pressed	Store the options FPS in a temporary variable and only set the real variable when the confirm button is pressed	GUI	S1
15	Options menu isn't showing	Call showpane() method from	GUI	S2

		options pane object		
16	Render time does not reset when paused	Reset render time when simulation is paused	GUI	S2
17	Generations per second updating exponentially at small levels	Add a check that subtracts current time from last updated time	gameLoop()	S2
18	Threads contain no locking mechanisms	Add locks to synchronize threads	gameLoop()	S1
19	Max delay can be negative	Add statement to check if negative	gameLoop()	S1