

Test Case

ID/Title:	Game of Life
Type:	White Box
For System:	Game of Life
Use Case:	Run Program
Prerequisites:	Console executable running and in touch with the display.

Program Elements Listing:

Element #	Program Element Function/Purpose	Program element type
1	Take user input	Function (with While Loop)
2	Execute game logic	Function
3	Display results	Function
4	Loop until user asks to quit	While Loop

Program Element Tests:

Element #	Scenario	Expected Result	Actual Result
1 User Input	User enters a coordinate in range (x: 1-20, y: 1-60). (<i>actual coordinate on array is what user entered, minus 1</i>)	(x,y) on the grid becomes true; user receives a confirmation message	
	User re-enters same coordinate	(x,y) remains true; user receives an error message	
	User enters coordinate out of range	User receives an error message	

	(except -1,-1)		
	User enters (-1,-1)	Stop taking user input and execute the game	
2 Game Logic	Checking neighbours of cells on the outside of the grid (x: 0 or 19, y: 0 or 59)	Only valid neighbours are counted; “index out of range” exception not thrown	
	Initial state	All cells but user-indicated cells are initially dead	
	Cell death	Living cell remains alive iff it has 2 or 3 living neighbours	
	Cell birth	Dead cell becomes alive iff it has 3 living neighbours	
	Maintain state	User can run another generation with the results of the previous	
3 Display Results	Display results of the game	Dead cells are blank; living cells are indicated with a character in an appropriate position	
4 Looping	User wants to continue	‘y’ or ‘Y’ continues the game by running another generation	
	User wants to quit	‘n’ or ‘N’ gracefully quits the program	
	User enters Ctrl+C	No exceptions thrown when running from console	
	User enters Ctrl+V	EOF character is detected and program gracefully exits without infinite looping	

Notes: 1. <i>(forthcoming)</i> 2. ...			

Project Closure Report Version Control

Version	Date	Printed By	Change Description
0.1	Nov 17 2012	WM	Initial draft
0.2	Nov 20 2012	WM	Noted that user uses grid as if it is 1-indexed