



CS 1632 Software Quality Assurance

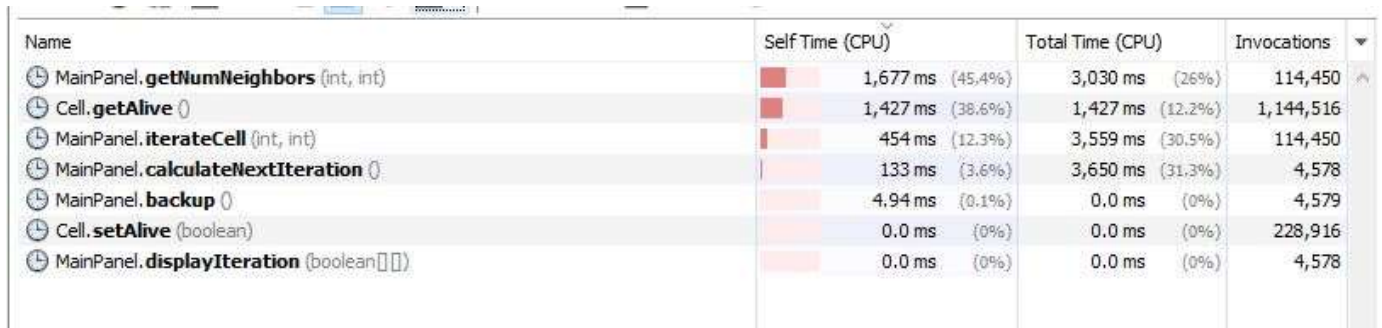
Deliverable 4

Member 1 Name: Stefon Miller

Member 2 Name: Thomas Bednarz

1. Optimized Feature 1

- Write the name of the feature optimized (the label on the button)
The first feature we optimized was the “Run Continuous” feature
- Write the name(s) of the method(s) you refactored to optimize this feature
To optimize the “Run Continuous” feature, we optimized both the `iterateCell` and `calculateNextIteration` methods
- Insert a screenshot of VisualVM CPU profiling *after* optimizing Feature 1. Please include only the “Hot spots” window in the screenshot.



Name	Self Time (CPU)	Total Time (CPU)	Invocations
MainPanel.getNumNeighbors (int, int)	1,677 ms (45.4%)	3,030 ms (26%)	114,450
Cell.getAlive ()	1,427 ms (38.6%)	1,427 ms (12.2%)	1,144,516
MainPanel.iterateCell (int, int)	454 ms (12.3%)	3,559 ms (30.5%)	114,450
MainPanel.calculateNextIteration ()	133 ms (3.6%)	3,650 ms (31.3%)	4,578
MainPanel.backup ()	4.94 ms (0.1%)	0.0 ms (0%)	4,579
Cell.setAlive (boolean)	0.0 ms (0%)	0.0 ms (0%)	228,916
MainPanel.displayIteration (boolean[])	0.0 ms (0%)	0.0 ms (0%)	4,578

2. Optimized Feature 2

- Write the name of the feature optimized (the label on the button)
The second feature we optimized was the “Write” feature
- Write the name(s) of the method(s) you refactored to optimize this feature
To optimize the “Write” feature, we refactored the toString method
- Insert a screenshot of VisualVM CPU profiling **after** optimizing Feature 2. Please show only the profile for Feature 2 (do not invoke Feature 1 while profiling). Please include only the “Hot spots” window in the screenshot, as before.



Cell.toString ()	0.0 ms	(-%)	0.0 ms	(-%)	25
Cell.getAlive ()	0.0 ms	(-%)	0.0 ms	(-%)	25
WriteButton\$WriteButtonListener.actionPerformed (java.awt.event.ActionEvent)	0.0 ms	(-%)	0.0 ms	(-%)	1
MainPanel.toString ()	0.0 ms	(-%)	0.0 ms	(-%)	1
FileAccess.saveFile (String, String)	0.0 ms	(-%)	0.0 ms	(-%)	1