**CS 1501 Assignment Information Sheet**

**Name: Zachary Whitney Assignment #: 1**

**Program Due Date: 6/7/2018**

**Handed in Date: 6/6/2018**

**JDK Version: 1.9**

**Source code file name(s): Crossword.java, DLB.java, MWT.java, DictTest.java, DictInterface.java, MyDictionary.java**

**Other file name(s): zdw9\_crosswords.docx (W section essay), dict8.txt, test3a.txt, test3b.txt, test4a.txt, test4b.txt, test4c.txt, test4d.txt, test4e.txt, test4f.txt, test5a.txt, test6a.txt, test6b.txt, test6c.txt, test7a.txt, test8a.txt, test8b.txt, test8c.txt**

**Does your program compile without error?: YES**

**If not, what is/are the error(s)?: N/A**

**Does your program run without error?: YES**

**If not, what is/are the error(s) and which parts of your program run correctly?: N/A**

**Additional comments (including problems and extra credit):**

**How to use Crossword.java:**

**args[0] is the dictionary type**

* **(“DLB”, “MWT”, or MyDictionary is the default)**

**args[1] is the board’s filename**

**args[2] is optional, but will run my improved algorithm if passed “fast” -- see below**

**I implemented my backtracking algorithm in a simplistic manner at first. It only backtracked one tile at a time. Later, I altered the recursive algorithm to return the number of tiles to backtrack so that it could more intelligently backtrack a whole row at a time when encountering dead-end columns. I have results tables showing the differences between these 2 approaches. Note that the original (slower) option runs by default.**

**Crossword.java has also been equipped with the ability to run a Multi-way trie DictInterface by entering “MWT” as the first command line argument. I only had time to test the MWT for the revised algorithm, however. I included the test results for the MWT and a brief analysis in my essay.**

**The essay is currently a tangled draft. I tried to focus more on the content for this version and I intend to revise it later in the course to improve its organization and style. I didn’t have time to weave the new additions (the trie and the second algorithm) back into the draft in a cohesive and sensible way.**