**P5 exercises your understanding of hash tables.**

Submitted programs must:

1) provide the requested functionality

2) be appropriately documented (thorough but concise)

3) use C++ constructs as intended

4) may NOT use the STL

ALL ASSUMPTIONS SHOULD BE REASONABLE AND CLEARLY STATED

DO NOT HARD CODE

The Gutenberg project digitized many classic books, making them available online for free.

Leo Tolstoy’s classic tome, War and Peace, and Charles Dickens’ Great Expectations are two such ebooks: [http://www.gutenberg.org/ebooks/2600 (Links to an external site.)Links to an external site.](http://www.gutenberg.org/ebooks/2600) and [http://www.gutenberg.org/ebooks/1400 (Links to an external site.)Links to an external site.](http://www.gutenberg.org/ebooks/1400)

Write the C++ code (class design and driver) that:

1) defines a hashTable type that

supports the standard hashTable operations

defines an appropriate hash function

resolves collisions effectively and efficiently

supports query for frequency

2) uses this hashTable type to process the full text of War and Peace

       Stores each distinct word of length 5 or greater from the text

             Words are non-numeric and are case insensitive

       Tallies the count of each distinct word

             Incrementing the occurrence count each time the word appears

3) repeats step #2 for Great Expectations

4) dumps the following summary data to output file called P5Output.txt:

       The number of distinct words of length 5 or greater in each text

A formatted and readable list of the 15 words that occur most frequently in BOTH texts.