CSCI S-38 Summer 2018
Extra Credit

Part I - Up to 25 points

Make a modification to the SafeArray problem from PS6 as follows:

1. Create an exception class called ArrayBoundsException
    - The class should accept a reference to a SafeArray object as a parameter and the attempted index value
    - ex:

      SafeArray s;

      int index;

      //lots more code here …

      throw ArrayBoundsException(s, i);

    - The class should include a method called errorMessage that displays the message that a boundary error has occurred as well as the current size of the SafeArray and the index.
2. Use this exception in your SafeArray code when an out of bounds error occurs

Part II - Up to 50 points

Read the lyrics from the song American Pie from the file ampie.txt.

Remove all punctuation

Determine the frequency of each word in the song

Display every word in the song (punctuation not needed) in order of the frequency in which it appears - and the frequency. Words with a higher frequency count should appear first.

This assignment is not about just getting it to work, but digging to explore and identify the most elegant solution.