Daniel Beyer
beyerda@oregonstate.edu
CS 261 Date: 08/02/16
Assignment 6 – Written Portion

1. Ate and tea would has to the same value using hashFunction1 but would not using hasFunction2.
2. hashFunction2 is superior to hasFunction1 because hashFunction2 takes the char position into account, which will minimize the number of links assigned to a given bucket (less collisions) and so maintain a O(1) level of complexity.
3. No, the hashMapSize function will not change because the same number of words will be input creating the same number of HashLinks.
4. No, hashMapTableLoad will return the same value regardless of which function is used. This is because the load is the ration of the number of links and the total number of buckets. These values will not differ between different uses of the hashFunctions.
5. Yes, it is possible for the hashMapEmptyBuckets function to return different values based on which hashFunction is used. This is because each function will cause different numbers of collisions and have different numbers of empty buckets.
6. Yes, there is a difference in the number of empty buckets when the table size is changed from an even number like 1000 to a prime like 997. A prime number does a better job of distributing the links to different hash buckets and results in fewer collisions.