Project 4 Report

Hash Table:

I used a regular array as hash table to store the input string.

Hash Function:

There is two hash function since I am using a double hashing method.

Both functions produce an integer with hashCode function that turns string into integer. The first hash function uses the mod of integer with the table size like the following: hashkey = key % TABLE\_SIZE. And the second hash function is following: hashkey = 3 – (key % 3). Number 3 is chosen because it is a prime number and after couple trials of testing it produce the lowest average probe.

The hash function is credit to <http://faculty.cs.niu.edu/~freedman/340/340notes/340hash.htm>

Collision Resolution:

Double hashing is used to solve the collision. When there is a collision occur, the

index is updated with the following function: (firstHash + i\* secondHash) % TABLE\_SIZE. Where i is updated when a collision occurs.