Project 5 – Pseudocode

**HashTable**

**insert(DataItem item)**

set *probeCount* to 1

declare String *key* and set it to *item*’s last name

pass *key* to hashFunc() and assign the returned hash value to integer *hashVal*

loop while element at index *hashVal* of *hashArray* is not null and while its key is not -1

increment *probeCount*

pre-increment *hashVal*

assign the remainder of *hashVal* and *arraySize* to *hashVal*

// end loop()

assign *item* to index *hashVal* of *hashArray*

return *probeCount*

// end insert()

**delete(String key)**

set *probeCount* to 1

pass *key* to hashFunc() and assign the returned hash value to integer *hashVal*

loop while element at index *hashVal* of *hashArray* is not null

if last name of current element is equal to *key* and its key is not -1

logically delete the element

return probeCount

// end if

increment *probeCount*

pre-increment *hashVal*

assign the remainder of *hashVal* and *arraySize* to *hashVal*

// end loop

return -1

// end delete()

**hashFunc(String key)**

set *key* to lowercase

declare integer *hashVal* and set it to 0

loop through each character in *key*

declare integer *letter*

if the current character of *key* is ‘\_’

set *letter* to 0

// end if

else // the current character of *key* is something else

set *letter* to the current character of *key* – 96

// end else

set *hashVal* to the remainder of (*hashVal* + *letter*) and *arraySize*

// end loop

return hashVal

// end hashFunc()

**displayTable()**

loop for (int j = 0; j < arraySize; j++)

if current index of *hashArray* is not null

if the key of index *j* of *hashArray* is equal to -1

print formatted string with index number and “\*” appended to index’s last name

// end if

else // not equal to -1

print formatted string with index number and index’s last name

// end else

// end if

else // current index is null

print index number

// end else

// end loop

print blank line

// end displayTable()