Problem Set 4

Assigned: Feb. 27
Due: March 6

The grader for this homework will be Monish Vachhani. His email address is monish.k.vachhani@gmail.com

Exercise 1

For the class MyHashTable, write a method public void remove(String k), which deletes the record associated with the key k.

Exercise 2

For the class CircularArray, write a method public boolean equals(CircularArray<T> m) which tests whether two FIFO queues implemented as circular arrays have the same elements in the same order.

For instance, suppose that c and d are both of type CircularArray<Integer> with the following data fields:

```
c.elements = [null, null, 7, 11, 7, 4, null]  
d.elements = [7, 4, null, 7, 11]
c.start = 2   
d.start = 3
```
```
c.end = 6   
d.end = 2
```

Then c.equals(d) should return true, because conceptually these are both implementations of the queue with elements 7, 11, 4.

In comparing two elements of the queues, you should use the equals method defined for that type. For instance, to check whether c[i] is equal to d[j], use c[i].equals(d[j]).

Honors Exercise

For the class MyHashTable, and using the class MyList1 define method public MyList1<String> keySet(). If h is a hash table of type MyHashTable, then h.keySet() should return a linked list of all the keys in h. Do not worry about the efficiency of your answer.