

## CSC 20 – Exam 3 – Fall 2018

1) (5 Pts) Write on the dashed-lines the output produced by the method when passed each of the following Maps.

```
public void mystery(HashMap<String, String> map) {
    ArrayList<String> list = new ArrayList<String>();
    for (String key : map.keySet()) {
        if (map.get(key).length() > key.length()) {
            list.add(map.get(key));
        } else {
            list.add(0, key);
            list.remove(map.get(key));
        }
    }
    println(list);
}
```

-----  
{horse=cow, cow=horse, dog=cat, ok=yo}  
-----  
{bye=hello, bird=dog, hi=hello, hyena=apple, fruit=meat}  
-----  
{a=b, c=d, e=a, ff=a, gg=c, hhh=ff}  
-----

2) (5 Pts) Write a static method reverse that takes a List of String as a parameter and reverses its order. The method should not return anything.

3) (5 Pts) Write a method for LinkedList (as seen in Practice-It) called stutter that duplicates each element so that, for example, [1,2,3] becomes [1,1,2,2,3,3].

4) (5 Pts) On the back of this page write a method for LinkedList (as seen in Practice-It) called compare that takes a second LinkedList as a parameter called other and returns which of the two linked lists is shorter. Return -1 if the list starting at this.front is shorter than the one starting at other.front, 0 if they are the same length and 1 if the other is shorter. Do not call any other methods to help.