1 Linked list Worksheet

1.1 Basic Node

Write a node (or link, or awesomelink or ...) class that holds a String and a reference to the same type of object.

1.2 Basic List

Using your node, write a list (or sequence, or coollist or ...) class that holds a size variable and a head and tail reference. Write these methods:

1. add(int pos)
2. get(int pos)
3. remove(int pos)
4. removeFirst(String s)
5. removeAll(String s)
6. size()
7. removeAllMatching(String regex) // hint: use String.matches
8. isEmpty()
9. getFirstMatching(String regex)
10. List<Integer> getPositionsOfAllMatching(String regex)

1.3 Immutable node

Write an immutable (all final) node class named anything you want (perhaps StringSeq), with a String and a size field in addition to the reference to next. Write methods for:

1. add(String s) //adds to front
2. get(int pos)
3. drop(int howMany)
4. take(int howMany)
5. filter(Predicate<String> keep)
6. StringSeq map(UnaryOperator<String> op)