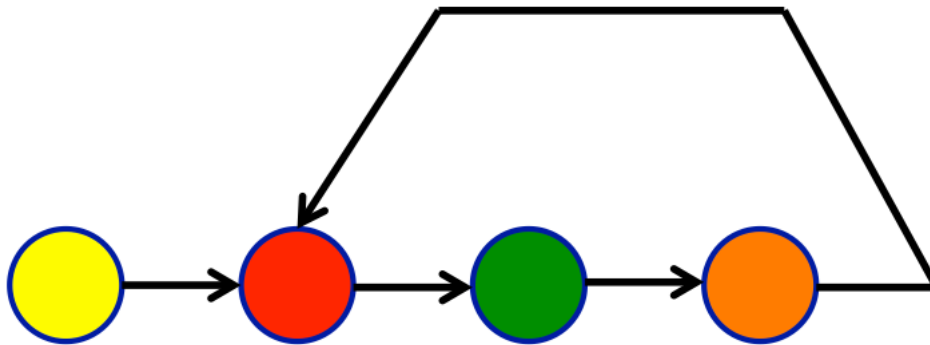


CS 46B  
Spring 2017  
Homework 6: Linked Lists



Due 11:55 PM on Wednesday April 26.

In this homework you will implement `find()` and `duplicate()` methods for a linked list class. To keep things simple, the list class and its node class aren't generic. The data of each node is one char, stored in a `CharNode` class that is provided. In the Eclipse workspace of your choice, create a new Java project containing package "linked" and add to it the 3 provided source files.

The method requirements are:

- `public CharNode find(char ch)` – Returns the first (i.e. closest to the head) node in the list whose data is equal to `ch`. If there is no such node, returns null.
- `public void duplicate(char ch)` – Finds the first node in the list whose data is deep-equal to `ch`. Returns if there is no such node. If the node is found, creates a new node containing the same data, and insert that node into the list either immediately before or immediately after the found node.

The `CharNode` starter file contains a `hasIntegrity()` method that checks some (but not all) aspects of list integrity. Use it (maybe in assert statements) in your `find()` and `duplicate()` methods if it will help.

This is a win-or-lose assignment. If your code passes the graderbot (class LinkedListTester), you get 100 points. If your code fails any part of the graderbot, you get zero points. As always, work will not be accepted after the deadline.