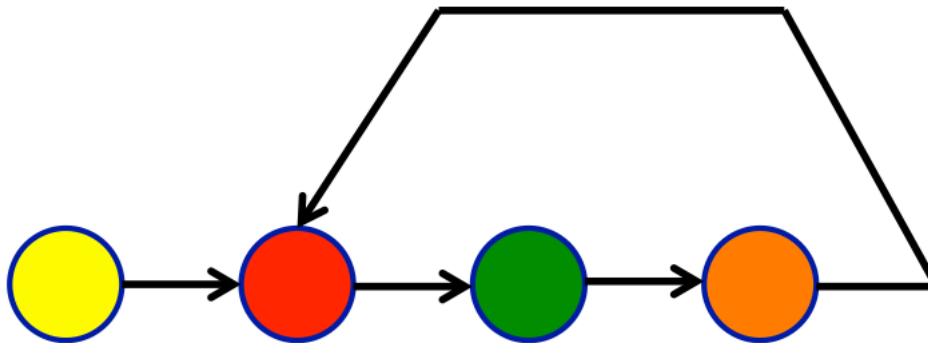


CS 46B
Fall 2017
Homework 7: Linked Lists



Due 11:55 PM on Tuesday November 14.

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 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.