Food for Thought and Programming Aids

This information pertains to the game class / front end, although you may find the first section helpful in understanding how the actions function you are to write for all board location back end classes will be used in the front end.

Responding to User Action Choices

I've written a function for you that you can use to prompt the user to select a choice from one or more choices and encourage you to use my function instead of taking the time to write out functions to handle menus.

To be able to use this function, you must download ActionsMenu.class and save it within the CLASSPATH on your system (in other words, wherever you've been putting your Java files).

ActionsMenu is a class that contains one static function. Here is the header and documentation you need to have to be able to use it:

```
public static int runActionsMenu(String[] actions)
// PRE:  Each element of actions contains a sentence telling a user
//        a possible option. actions.length >= 1.
// POST: Possible options from actions have been displayed to the console
//        and the user has been prompted to choose one (with error handling)
//        or acknowledge what will happen when actions.length == 1.
//        actions[FCTVAL] is the action chosen. (When there is
//        one action, it is chosen regardless of user reaction.)
```

A Taste of GUI: A Scrolling Window

While this program is to be a console application, viewing all of the information about the board in the console may be a bit much. Displaying a popup window with a scrollbar may be more manageable. Here's a partial method to do so (which you may adapt):

```
public void PopUpAllBoardInfo()
// [***** you fill in appropriate external documentation *****]
{
    String result;                                  // Output message displayed in the window

    JTextArea area;                                 // Text area to hold the message
    JScrollPane pane;                               // Window pane with scrollbar containing text area

    // You build the result message here...

    area = new JTextArea(result);
    area.setRows(40);
    area.setColumns(50);
    pane = new JScrollPane(area);
    JOptionPane.showMessageDialog(null, pane, "Monopoly Board Info.", JOptionPane.PLAIN_MESSAGE);
}
```

You are not required to use this GUI, but may do so for displaying the state of the board only. (One should be able to capture the rest of the interaction of your project in a console run.)

On Dice Rolls

Why do you make the decisions we make when programming? Why do we, the department, make you take math courses as part of your CS training? Here's a question to think about: Does it make a difference if you generate one random number or two for tossing the dice in this game? Why is this, mathematically? Think about this. I'd enjoy discussing it with you.