**CSC 232 – Software Development**

**Project Assignment #4 – Some Traveling Music Please!**

# Due Friday, November 17, by the beginning of class

This part of the project will involve designing and coding your text adventure framework to have multiple locations so that the player can travel from location to location. Work with your group members to complete this assignment. Make sure that the work is submitted to your Github repository by the due date and time.

***Part One: Design and Implement Connections Between Locations***

Decide how you want to represent the map of your text adventure, so that the player may move from one Location to another by giving direction commands. Here as some possible implementation ideas:

* Have each Location maintain references to four neighboring Locations (north, south, east, and west). If the reference is null, the player may not move in that direction. You will then need to extend the driver to recognize the commands *go north*, *go south*, *go east*, and *go west*. You could extend this to more than four directions as well.
* Have each Location contain a Map<String, Location> that associates direction names with the Location reachable by going in that direction. You will then extend the driver with a go *direction* command (similar to the previous, but more general, as you could go in any direction represented as a String).
* Design a separate GameMap class that describes the positions of all the Locations, maybe by giving them *(x, y)* coordinates. Then you will need to supply a method that takes the current location and a direction and returns the next location in that direction (or **null**). You will then extend the driver to refer to the Map object to handle travel commands.
* Some other approach of your own design.

The Map approach is probably best, but you may use any option that makes the game work. You will need to add whatever methods are necessary to implement these changes. For any of the above options, you could leave out the word “go.”

***Part Two: Extend the Driver***

Extend the Driver class in a manner consistent with how you chose to address moving between Locations above. Additionally, add a help command that will print some instructions for the user when it is typed.

***Part Three: Test the New Classes***

Thoroughly test your code to make sure that travelling works correctly, as well as the help command. Make sure that your code handles error conditions gracefully, and that the extended driver is tested on both valid and invalid input. ***You must create at least three Locations for testing purposes.***