

# COSC 2P90 – Assignment 4 – Fall 2013

## Board Games! Fun!

### UML! ... Fun?

**Due:** Monday, December 2<sup>nd</sup> @ 5:00PM

For this assignment, you'll be making use of various UML tools.

**Premise:** Do you like board games? (For the sake of this assignment, pretend that you do) You'll be choosing a board game of your preference and going through the basic design process (i.e. modelling it in UML).

**Part A** – Specify the board game you chose, and include a simple explanation of it. Unless you chose a particularly complicated one, one or two paragraphs is probably fine. If you picked something a bit more esoteric (e.g. Awari), you may wish to be a bit more verbose. To be clear, this should be reasonably detailed, but in *plain English*.

**Part B** – For the board game you selected, create Use Cases to define the game and play. How many you'll need will depend on the game you chose, but hopefully you chose something that requires at least a few.

**Part C** – Assemble your Use Cases from Part B into one or more Use Case Diagrams.

**Part D** – Here's where the fun stuff happens. For the game you selected, use Class Diagrams to model the system. Make sure to include important state information (e.g. players in Monopoly have money) and behaviours (e.g. in Monopoly, a player can mortgage a property, and later pay off that mortgage. How could you model this?).

**Bonus Part E** – A static representation doesn't really explain a system very well. Draw sequence diagrams to model how your game is played. Use enough sequence diagrams to give a reasonable understanding of gameplay.

#### Notes:

- The board game may include dice (e.g. Monopoly), or it may not (e.g. Shogi)
- It doesn't matter if you assume that you're modeling humans or AI bots for players. Your level of detail should be sufficient to include things such as making moves, but abstract enough to not be concerned with things like plies.
- For the UML diagrams, you're more than welcome to draw everything entirely by hand, using software of your choice, or any combination of the two.

**Reminder:** You're more than welcome to complete this assignment with a partner if you like.

**Submission:** There is no requirement for an electronic submission, but it *might* improve marking time if you do. Either way, you must still perform a physical submission, including departmental cover page.