CS 2ME3 and SE 2AA4: Assignment 2   January – April 2015

Due: 21 March 2016

You have already constructed much of what is necessary to play a Six Men's Morris in Assignment 1. This assignment essentially implements a two-player Six Men's Morris game.

Specifically:
1. The Six Men's Morris board is the same as in Assignment 1. All the rules of the game are as specified in Assignment 1.
2. This version requires you to be able to make moves, in turn. The moves have to be legal moves. The application has to recognize when the game has been won, or if the game cannot be won. The result of the game must be displayed at all times. Suggested results are: "Blue wins"; "Red wins", "Game drawn"; and "Game in progress". Each move must be checked to show that it is legal (likely using the module(s) you created in Assignment 1).
3. The order of play (blue first or red first) shall be determined randomly.
4. The user shall be able to choose to start a new game, store an existing unfinished game, and re-start a stored game.
5. The deliverables for the assignment include a design document as well as the code and an executable (PROVIDE A JAR AND/OR BUILD/RUN SCRIPT in addition to source code).

    The design document should include:
    5.1. a description of the classes/modules you have decided to use in your application, and your explanation of why you have decomposed the application into those classes;
    5.2. for each class, a description of the interface (public entities), and make sure that there is a description of the semantics (behaviour) of each public method in the class including a reference to what requirement(s) was(were) implemented in the method, as well as a description of the syntax;
    5.3. a view of the uses relationship;
    5.4. for each class, a description of the implementation (private entities), including class variables - include enough detail to show how the class variables are maintained by the methods in the class;
    5.5. an internal review/evaluation of your design.
    5.6. Document the code so that it is clear how the code follows its design, and also explain design decisions in the code that were not included in the design document.
    5.7. *You can re-use the documentation you delivered for Assignment 1, but you must indicate any changes you have made. The changes can include corrections to your previous version as well as modifications because of changed functionality, and additions.*
6. Include a test report document that records how you tested your application (we have not discussed testing yet – so you are on your own with this document ☺).
7. In order to help you with any further class decomposition, here is some indication of what is to come in assignment 3:
    7.1. Assignment 3 will require you to provide two modes of operation: 2 player Six Men's Morris, in which 2 people can play against each other; or 1 player against the computer. The latter mode will require you to include an automated mode in which algorithms are used to determine the moves for the computer.

Grading:

The assignment will be graded out of 50.

    35 marks for the design document (decomposition – 10, public interface – 8, uses relationship – 4, private implementation – 6, traceability – 4, evaluation of the adequacy of the design – 3).

    15 marks for the code (layout, variable names, comments, etc – 5, and "correctness" – 10).