Design Verification and Review

February 26, 2015

Tasks Required and Description of Observed Completeness

1. Program enables the user to set up a 7-6 Connect Four frame
   (a) This is easily done through the 2 player implementation that is enabled within the program.
2. Order of play is determined randomly
   (a) While not visible when running the program itself as the game is incomplete, an inner examination of the methods have shown that the implementation for deciding player turns is present and as such, the implementation for deciding order of play is acceptably complete
3. Application verifies if entered board state is valid and outputs according to validity
   (a) Within the implementation of 2 player, the option to setup the board accurately examines valid entries and as the dropping physics are automatically applied upon entering tokens, parses unbalanced boards and win conditions accurately

Architecture and Design Review

Modules:

The tasks for the application have thus far been completed through applying 5 modules revolving around the concept of game and board states. This implementation was determined to have identified the unique portions and isolated them so as to emulate a properly designed application while completing the tasks identified.

1. sdl2_connect4
   - sdl2_connect4 is the module that handles user interface decisions made in various designated states and contains the main game loop

2. gameLogic

    - gameLogic maintains the state and a "current model" of the game and updates physics/logic accordingly

3. graphics

    - graphics allows for graphical manipulation of the user interface with regards to the game thorugh use of game information through board and linkedList

4. board

    - board is an API for the current state

5. linkedList

    - linkedList is an API for the falling token drop implementation

Note: Initially, both the game loop implementation as well as graphical update implementation were contained within the same module. However, it was identified that this could hamper design if the graphical implementation needed to be changed. So, the graphics was abstracted out into its own module with the game loop remaining with the sdl2_connect4