Stock Trading Simulator Project

Software Design Document

1. Model
   1. Game
      1. Game
         * Container holding a name, cash amount and positions.
      2. Name
         * String the player can put in for a name for their save game.
      3. Cash Amount
         * Amount in fake cash
      4. Positions
         * Array of position
   2. Position
      1. Symbol
         * String of purely lowercase letters. Displayed as upper case. A GetDisplay method exists.
      2. Buy Price per Share
         * Number. Cannot be negative
      3. Date
         * The date and time it was “purchased”
2. User Interface
   1. Template
      1. Header
         * Displays at the top
      2. Footer
         * Displays at the bottom
      3. Navigation Bar
         * The navigation bar is a part of the header. It will provide buttons to the positions, search, and game screens.
      4. Content Container
         * Displays flexibly between the header and footer
         * Holds a screen.
         * Allows a screen to be replaced with another screen. Screen is passed in as an element.
   2. Screens
      1. **Positions**
         * Displays the positions currently held in the game. Each displayed with a position view.
         * Allows a position to be sold.
         * Allows one to buy more.
         * Shows total value.
      2. **Search**
         * Displays a search bar
         * Shows search result below
      3. **Game**
         * Displays information about the game, like the name
         * Has a settings container with some basic settings. – *Low priority as it requires saving.*
         * New Game Button – Starts a new game
         * Shows a **Load Game Container**
   3. Views
      1. Search Result
         * Displays the symbol and current price
         * Displays a chart, adjustable by time. Separate GET request.
         * Displays basic information in asset
         * Displays Balance Sheet
         * Displays Income Statement
         * Displays Cashflow Statement
      2. Position
         * Displays how much is owned.
         * Displays symbol.
         * Displays current price.
         * Displays price bought at
         * Displays number of shares
         * Displays buy button. Brings up transact for buy.
         * Displays sell button. Brings up transact for sell.
      3. Transact
         * Displays number of shares input
         * Displays transact button (which displays buy or sell, and saves the game)
         * Displays cancel button, which dismisses the view.
      4. Settings
      5. Load Game Container
         * Displays a list of load games from the local storage
      6. Load Game View
         * Displays a single load game
         * Displays its name
         * Displays last log in.
   4. Elements
      1. Button
      2. Text Input
      3. Element Builder
      4. Are You Sure – *Low Priority*
3. Theme
   1. Overall
      1. Clean, focused, calm, strong theme
   2. Colors
      1. Foundation
         * Weak, Darker Blue
      2. General
         * Blues
      3. Strong
         * Yellow
      4. Text
         * White
   3. Shape
      1. Clean
      2. Slight bevel
      3. Very small rounded corners
      4. Convey stability with squares.
   4. Texture
      1. No texturing. Clean solid colors.