## Design

The plan for this will be laid out in text form, but the images of the whiteboard designs will be provided as supplemental information for how concepts evolved.

1. CONTROL
    a. Control is the brain of the entire project. It brings everything together into a cohesive whole including instantiating maps, instantiating items, receiving player input and taking appropriate action, etc.
        i. List of some key functions and data members
            1. Holds pointers for all of the to-be-instantiated Locations.
            2. Holds pointer to the player instance
            3. Receives player input. Based on this input:
                a. Moves the player
                b. Causes the player to interact
                c. Causes the player to investigate
                d. Displays the player's inventory
                e. Displays a help menu
                f. Requests game-exit confirmation
2. LOCATION
    a. Location is the class that will be used to generate instances of maps. It will perform several tasks, all of them being within a similar realm of activity.
        i. List of some key functions and data members
            1. Holds a pointer to the 2D array that is the map (2D array of pointers to Tiles)
            2. Holds the length and width variables
            3. Holds the direction location (North, East, South, West)
            4. Holds a room name (string)
            5. Function for generating the actual map based on the length and width parameters.
            6. Functions for returning maps and individual cells
            7. Functions for manually inserting specific types of cells into instantiated Locations
            8. Displays the map of the player's current location
            9. Holds the investigate function used by player input
            10. Hold the interact function used by player input
3. TILES
    a. There will be several tiles throughout the game so Tile will be the base class that contains some basic information. Some tile will be providing more functionality than others. Below is a list of these tiles.
        i. Floor
        ii. Wall
        iii. Player
            1. The player will have an inventory array that is filled with pointers to items
        iv. Blockade
        v. Door
        vi. StasisCapsule
        vii. Terminal

1. This is something that the player will be able to interact with that affects other tiles like Doors

viii. Switch

1. This tile is possibly the most complex as this involved potentially interacting with multiple other tiles both as dependents (tiles that activate when this is activated) and as affected tiles (tiles that act conditionally based on the status of this switch and its dependents). This can either be off or on.

4. ITEM
    a. This class is very simple and only holds two values (with get/set functions), an item name and a description. It does nothing else.