Project Description

The name of the project will be called *Settlers of Catan*. The rules of the game are similar to the real-life board game, with players drawing resources off of dice rolls and building settlements and cities to gain points.

Competitive Analysis

Here is a previous 15-112 Term Project also largely based on *Settlers of Catan*: https://www.youtube.com/watch?v=oI-RFFieSwc

My project will be similar in the sense that the board will be randomized every game. The numbers and hexes of the board are going to be randomly generated. Rolling dice and collecting resources will also be a big part of my game, as well as buying settlements and upgrading to cities.

Something different about my game is that it will be 4-player rather than 2-player, and I will enable sockets to that players can play from different devices. I will also add features so that you can always see which cards you have in your hand, and I will add a trading feature so that trades between players can be proposed and done.

Structural Plan

I plan to first create the board and all the elements of it needing to be randomly generated. Then, I will create a class, with an instance for each player in the game, and have all of them have functions to keep track of when they draw cards, which expansions they can buy, as well as trade cards with one another. I plan to have a class be each page, and I will link all these pages to the main run page.

Algorithmic Plan

I believe that the most challenging part of the project will be trading. To do this, I will set up sockets so that when one proposes a trade, the info will get sent through the server and viewed by the other players. I will also set up a clock/timer so that the trade can only last for 10 seconds before expiring.

Timeline (Updated)

4/17/18 - Finish Board
4/27/18 - Finish Dice, Resources, and all Building Features
4/29/18 - Finish enabling sockets
5/3/18 - Debug and turn in

Version Control

At the end of every checkpoint, I will copy paste my code into a new file in Google Drive so that it will be stored in two locations, and unlikely will be lost.

Module List

- Sockets

Update

Instead of using classes to define players, I will just define all player scores, resources, and expansions in several variables within my init function.

TP3 Update

Everything went as planned, except for my decision to not implement player-to-player trades, and do bank trades instead. Players were able to trade based on what ports they settled on with the bank, but not with one another.