**Project Description:**

Settlers of Catan. The project is based on the popular board game “Catan”. Catan is a turn-based strategy board game that involves trade, resource planning. The goal of this project is to emulate the game process, allowing players to connect to the server from two computers and have an online game experience.

**Competitive Analysis:**

112 BuddyChat: The two projects have similarities in that we both use sockets as a module that allows multiple users connect to the server. The focus of Buddy chat is more about the machine learning side rather than the UI design or the complexity of the game itself. Aside from the machine learning algorithm, the interface is fairly simple. In the Catan project, much efforts need to devoted on the game UI design. How to let the user interact with the game in an interesting way and make it accessible to players who never played this game before is the key to the success of project.

Animal Chess: Both games are turn-based games using sockets. There is a fixed map in both games that can be updated according to the players’ move. In the animal chess game, each animal forms a part of the map. So, when the player changes the location of an animal, the map is changed as well. In the Catan game, player only add things to the map (building roads, settlement or cities for example) while the basic map stays the same. Additionally, in my game, trade is allowed among players. Thus the information that is demonstrated on two screens are not entirely the same, which is different from the Animal Chess game.

**Structural Plan:**

Three background photo files. Objects: Bars, Players. Files: init, Maps, players, socket (server connection), readme

**Algorithmic Plan:**

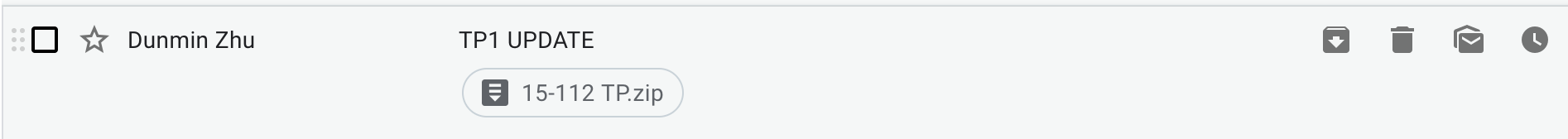
Set up a class named players. While the game is not finished, the player takes turn (in a loop) to do certain actions, which will be a method for the player class including: trading or building. After rolling the dice, the resource that each player gets will add to the corresponding attribute of the player object. Each player can only see the resource cards at their hand and this will be done through socket as the map is updated at the same time. For the establishment of settlement/building, I am leaning towards using 2D shape to create a pseudo 3D image using projection concept. A lot of the “extra bonuses” need to be created on a separate canvas.

**Timeline Plan:**

Socket Module: The end of this week

The basic game setup: The end of this week

**Version Control:**

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Currently using Gmail for version control

**Module List:**

Tkinter, socket

**TP2 Update:**

Settlements and cities are now built in 2D shape while 3D shape is expected to be done in the next week. The trade function works well now. The development card and the mob function is yet to be coded. There are a lot of UI that can be improved in the next week.

**TP3 Update:**

* Settlements and cities are now built in 3D shape.
* The font has been changed.
* Trade function has been fully developed: players can trade with PC and among players.
* Development card can be used.
* Write a help.txt to help new players
* Players can move mob with the mob card.