Project Description: Monopoly! is a python game coded to mimic the real monopoly and implements all the rules of monopoly. In addition, it's multiplayer and players can make their own decisions until ultimately the winner is decided by the wealthiest player.

Competitive Analysis: Compared to William H. Bell's monopoly simulation, mine is multiplayer and takes into account the number of players who want to play along with them taking turns. In addition, his simulation of monopoly doesn't show the graphics of monopoly and the players moving. In addition, mine shows messages the game asks the player to help the player keep track of what is happening.

On the other hand, Aniket Sanghi's game uses pygame to create a lot of his board pieces and tiles, while mine is also created by tkinter. Regarding the movement of the board, I simply used oop to changed the movement of the board when it hit a corner, but Aniket did multiple hard coding of his game by changing the row,col even on the straight movements.

Structural Plan: All the movement of the players and organizations of the players will be stored in classes. The main python file will have the game. Then there will be files in the zip file including photos used in the game along with cmu graphics

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Algorithmic Plan: Because there exists multiple properties and multiple players, I've created two class objects: player and property. Based on the row, col of a property and the row, col of a player taken from their attributes, we will be able to determine if the player is on that property or not. From there, we will buy and sell properties by owner and change the rental price and balances of each player accordingly. Multiplayer function is created by taking the input of players and using a for loop to create player objects with their specific attributes.

Timeline Plan:

4/26 -implement buy and sell properties to hotels, chance and community card functions, multiplayer function

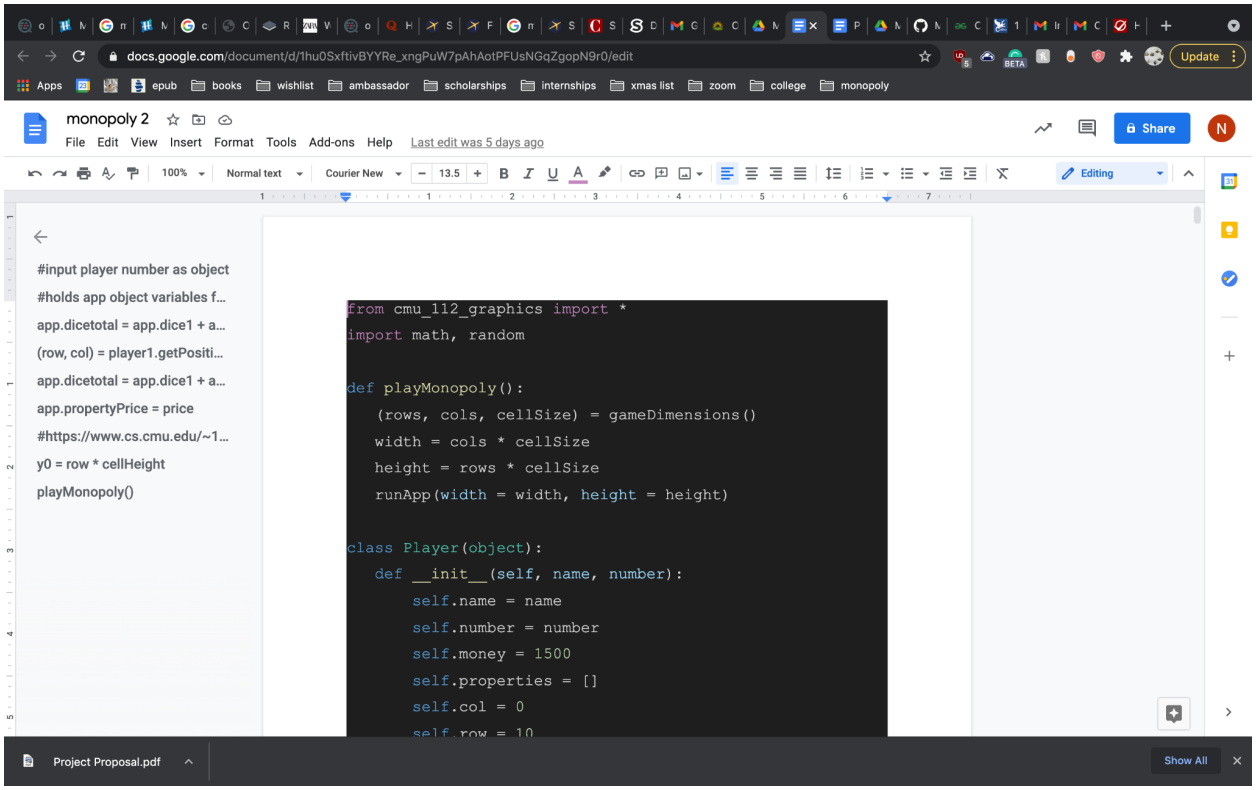
4/27 - finish adding properties to board along with other tiles, choosing player to go first through dice roll, how player wins, go adds 200 to balance, mortgage, income tax, jail

4/28 - bankruptcy, miscellaneous, choosing player pieces

4/29 - make it look better, finish details of game check for mvp and think about sockets or storing user data, reach MVP BY NOW

4/30 - 4/5 - sockets work

Version Control Plan: I backup my code in google docs.
https://docs.google.com/document/d/1hu0SxftivBYYRe_xngPuW7pAhAotPFUsNGqZgopN9r0/edit?usp=sharing



Module List: Sockets and possible pygame, have not done tech demo or mvp yet

TP2 Update: I decided not to show each player's assets because then it wouldn't be a working game. Instead I made the stats toggle between players depending on turn so there's no cheating allowed. Picking player pieces has not been implemented yet, but it will be. I want to add a name element to my players, but keep calling each player's actions by their number due to needing to iterate through players for actions. Building hotels has bugs involving not letting more than one hotel be built on each color when it should be property. I'm also thinking of using timer fired for income tax as one is not allowed to count their assets before deciding whether or not to pay 200 or 10% of assets. The game can't tell if the player is counting assets or not but it would give the player limited time before making them pay 200.

TP3 Update: No design changes.