Felicity Gong

15-112

Section Q

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Term Project Proposal

For my term project, I would like to design a local version of the multiplayer board game Settlers of Catan, using Tkinter. The game will start with a description of how the user interface works as well as basic game rules and a link to an extended rulebook on the Catan website. This will be a help screen that can be referred to at any point in the game by a question mark in the lower right corner. Next, there will be a screen to select the number of players, 2-4 and their respective colors: white, red, blue, and orange. Then we'll move onto actual game play. The board will be displayed in the upper left corner, with randomizes land tiles and tokens in a 2D list of tuples, possibly with a reshuffle option if the board ends up being bad. If I have time, I could write an algorithm to create boards of different difficulty levels or just to analyze if a board is worth playing or not. Next to that will be a bank, with all the things you can buy with the different corresponding necessary resources and a set of dice that automatically roll at the beginning of each turn, as well as a stack of development cards that can be purchased. At the bottom of the page will be tabs that display the different players' resource cards, development cards, leftover pieces and victory points. Resources will be automatically added each roll. Development cards that have been played will be discarded, unless they are victory points. There will be a knight counter and a road-length counter for largest army and longest road points. If the robber is activated the players will go in turn selecting the resources that they want to discard. To select the player you want to steal from, just click on the tab with the player's name. The player to first reach 10 victory points will win the game. There will be an end screen with an option for a rematch or just to exit the game. If I have time, I will add a chat screen on the side to make trading and other communication possible.