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Introduction

Our game is titled Bidding Tic-Tac-Toe. It's a spin on the classic tic-tac-toe game that adds more complexity, fun and excitement through the addition of a bidding component to the game. This game is deceptively simple, requiring more forethought and planning than one would think a tic-tac-toe game would require. The most common rookie mistake is to bid too high on the first two turns, resulting in the other player having a lot more money. The other player would then be guaranteed to be able to play 3 turns in succession as the rookie would not have enough money to outbid on any of the turns.

How it works

Both players start off with $100 in their bank account. At the start of each turn, players will make a bid that cannot be seen by the other player. The player with the higher bid will get to play a piece for that turn, and the money from the winning bid will be transferred to the other player. This continues until the board is filled up, or a player fulfills the 3-in-a-row winning condition as in classic tic-tac-toe, where 3 pieces are in either a vertical, horizontal or diagonal line.

Main Features

Bidding Logic:
- User input is queried at the start of each turn to get the bids. We imported getpass to hide the bids from the other user when playing on local-mode. Through the use of if-else statements, the bids are compared and the higher bids gets to play the turn

Game Board:
- The game board is a dictionary with keys from 1-9 with initial values being empty strings.When a user makes a play, the value is updated with the appropriate key, to the user's symbol which is either a cross or a circle.

Winning Condition / Draw Condition Logic:
- By checking during each turn if values of the dictionary are the same horizontally, vertically, or diagonally, our program is able to determine when there is a winner. This is placed within a for loop of range 9, which is the maximum number of turns, after which the loop ends, and the game is declared a draw (which was the initial condition set)

GUI:
- We started off with a console-based GUI, but further implemented a Tkinter-based GUI after the base game logic was built.

Multiplayer:
- Our game was initially built to be played on only one computer. We then implemented Firebase to play the game across two computers.

Citations

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