Tic Tac Toe

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Team 3

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Overview

Leverage Firebase and Google Cloud services to show the feasibility of a turn-based multiplayer game

Instead of hosting a centralized multiplayer server, we use managed servers to allow for
- Easier & faster implementation
- Easier maintenance
- Scalable

The focus is on leveraging these managed services for a turn-based multiplayer platform and not so much the actual gameplay.

Overview

Tech Stack
- Firebase Authentication
  - Email
  - Google sign-in
- Firebase Functions (database transactions, game-state, player-state, matchmaking)
  - Database transactions
  - Game state
  - Player state
  - Matchmaking
- Firestore
  - Player accounts
  - Games in progress

Overview

Tech Stack
- Unity + C#
- Firebase SDK
- Android SDK
- Postman
  - Rest API testing
- Github + Fork client

Goal of Sprint 1

Create the base client-side tic-tac-toe gameplay functionality. The player should be allowed to login with a Google account, or sign-up by creating an account. The player should also be allowed to start a game with a random person online.

User Stories

1. As a player, I want to login with a Google account.

2. As a player, I want to create an account.

3. As a player, I want to be able to logout of my account.

4. As a player, I want to join a match with a random person.

5. As a player, I want to place a game piece (a X or an O) on a empty tile on the board.

6. As a player, I want to win the game by placing three of the same pattern, whether it is X or O, diagonally, horizontally, or vertically.

7. As a player, I want to quit a game.

8. As a player, I want to I want to view all the games I am currently playing so that I can rejoin any of them.

9. As a player, I want to be in multiple games so that I can later resume them and continue where I left off.

Demo Time

...questions?