

World Tournament Backend for Mobile Games

Description:

Mobile games are played by millions of players every day. I will implement a REST API to maintain users' progress according to the following requirements. While implementing, I will highly consider speed, security, and concurrency subjects.

Requirements:

User:

- Users shall start from level 1 with 5000 coins.
- New users shall be assigned to a random country.
- Users shall gain 25 coins for each level completion.

World Tournament:

- Tournaments start at 00.00 and finish at 20.00 every day.
- Users must have minimum 20 level and 1000 coins to contest.
- Tournament groups must consist of 5 players from different countries.
- The competition shall start when the group is formed.
- Each level passed during the competition increases user's and country's score by 1.
- Users shall be able to claim their rewards when the tournament is finished.
- If they have waiting rewards, users cannot join a new tournament.

Requests:

- **CreateUser:** Creates a new user.
- **UpdateLevel:** Proceed level and update coins.
- **EnterTournament:** Allows user to join the current tournament.
- **ClaimReward:** Allows user to claim reward and return updated data.
- **GetGroupRank:** Returns current rank.
- **GetGroupLeaderboard:** Returns the leaderboard of the current group.
- **GetCountryLeaderboard:** Return the leaderboard of all countries.