Riot Games HKG Studio

Context

Riot Games HKG Studio coding challenge.

Problem Statement

Let's pretend that we've created a new competitive online team-based game ;)

Players of different skills levels will play the game, so we'll need to match them in a way that keeps the game fun and fair. We want to match players based on their individual skill level and ensure teams are balanced. We're not expecting each matchup to be perfect (especially not at first), but we want the matchmaking system to eventually get smarter and accurately match players on teams.

Your challenge is to code a comprehensive matchmaking system in any technology you feel comfortable with. Your solution will repeatedly draw a set number of players from a larger pool and match them into teams. Players will enter the matchmaking process as solo participants, so your system should create balanced 3v3, 5v5, etc. teams.
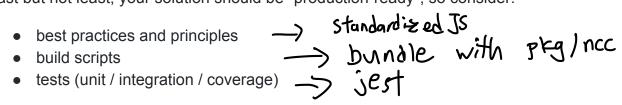
We've provided you with sample data in JSON for a pool of 200 players that includes their names, total wins and total losses. We're happy to toss additional info into the matchmaking mix, so go ahead and invent a new data field and use that in your code if you're feeling extra ambitious.

Criteria

An engineer will take whatever you submit and test it, so make sure your solution:

- is documented ——> in src
- contains the source code ——> private git
- will compile as submitted ——> state in README.md
- runs on any machine/OS ——> use docker
- is easy to test ;) ——> cli

Ideally, we want a flexible system that'll allow us to edit the matchmaking rules and test out different strategies without extensive engineering efforts.

Last but not least, your solution should be "production-ready", so consider:

- best practices and principles   → standardized JS
- build scripts   → bundle with pkg / ncc
- tests (unit / integration / coverage)   → jest

We've also provided you a Maven/Java project template as a starting point to create your matchmaking system but feel free to disregard it and propose your own flavor. Use the tech stack of your choice that will allow you to better demonstrate your craft/mastery.