CSE 643 Sec A

Homework Assignment 2:

Kabbadi Game

Consider the following variant of Kabbadi: There are two teams, each with 2 players, in a grid-based playing field divided into two halves. Each team has gold treasure at a fixed location in their half. A team wins by stealing the opponent's gold and bringing it back to their own territory. In each time-step, a team can move one or all of its players by one grid space. Any player can be captured when in enemy territory if an opponent player moves into the same grid square. Captured players are removed from the game.

Tasks

1. Create an environment to simulate the Kabbadi game for each case below:
   (a) turn-by turn moves, i.e., team A moves all players, then team B moves all players.
   (b) simultaneous moves, i.e, both teams move all their players simultaneously.
2. Create agents that play (i) randomly, (ii) greedily, (iii) using alpha-beta and (iv) MCTS.
3. Run the agents against each other, analyse the results and **present** your work.

SUBMISSION

Record a video of you presenting your solution via your presentation deck and explaining your code. **Note: you** need to record your screen and using a tool of your choice, upload it to a shared location.

Submit a zip file of your presentation deck that includes a public link to your recording, as well as all your code - the submission should be on **Google classroom.**

Note:

You may record your presentation on ICAPP if you choose. This is **optional** (i.e., you can choose not to use ICAPP and present directly on your machine as well) Note also: Incorrect answers to the AI's questions will *not* be counted against you. However, they may prompt you to better explain your solution, in which case your scores may improve.