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Assignment 2 Report

Tools, Libraries and Frameworks

For questions 1 and 2, I have implemented a three-tiered difficulty system, containing 3 difficulty settings per team (6 in total). I have changed the parameter passing code to contain a single static global parameter loader, holding all the parameters for the game rules, and a non-static parameter loader for each team. At the start of the game, each of the 6 parameter files are read into an array (lines 53-60 in SoccerPitch.cpp) with a pointer to the current difficult parameters being held in the SoccerTeam class. This enables quick switching of difficulty using the 1-3 buttons for team A and q, w and e buttons for team B.

For question 3, I added a check to the dribble execution to use the isThreatened function which checks if any players are nearby, thus triggering the kickball state (lines 687-690 in FieldPlayerStates.cpp). I then edited the Kickball state to contain an else on the support category to wait for support if the player is close to the opposing goal and to dribble if not (lines 648-660 in FieldPlayerStates.cpp)

For question 6, I added a stamina system which drains and refuels based on the speed of the player (lines 111-128 in FieldPlayer.cpp) and a new state of ‘Fatigued’ which causes the player to stop to regain stamina (lines 360- 400 in FieldPlayerStates.cpp)