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| Use Case Name: | Existing User: Game Board |
| Scenario: | Existing User Game Board Workflow |
| Triggering Event: | A user either starts a new game, or another user starts a game that the current user belongs to |
| Brief Description: | This describes the process of playing a game. |
| Actors: | All existing, logged in users assigned to play in this game instance |
| Related Use Cases: | Existing User: Game Lobby |
| Stakeholders: | Other logged in players with an active session, the node server admin |
| Preconditions: | The user must have an active session, and be a member of a game instance that is currently in Active status |
| Postconditions: | The user will be redirected to the Game Over screen |
| Flow of Events: | |  |  | | --- | --- | | Actor | System | | 1. User uses her finger to move a slider in either the up or down direction. This controls the vertical movement of her paddle, which is located on the left hand side of the arena square if the user is on Team A, or the right hand side if they are on Team B 2. The user will see a ball bouncing around the arena. The user must ensure that the ball does not touch the side of the square near her paddle, but the ball can strike her paddle, which will make the ball bounce off of it. 3. The user will see other paddles which represent other players, both on her team and the other team. As the other users move their paddles, the user will see those paddles moving in a vertical orientation. Both the user and other players can block the ball from striking their side of the arena square. 4. A team loses when the ball strikes the side of the rectangle their paddles are on 15 times. Ties are not possible. | * 1. Move the paddle in the same direction and speed as the user sliding her finger.   2. For every position change, send a message to the server with the position of the paddle.   3. Broadcast the location of the paddle to other players in the game   2.1 If the ball strikes the user’s paddle, send a message to the server with an incremented count of the number of collisions between that paddle and the ball.  2.2 If the ball strikes the side of the square on the player’s side, send a message to the server with an incremented count of the number of hits to that side.  3.1 If another user moves their paddle, send a message from the server to the client with the location of each paddle as it moves, and then update the position of that paddle accordingly on the user’s screen.  3.2 The size of each player’s paddle is dependent on the number of players on the team. Decrease the size of the paddle for this user by 20% for every other user that exists in their team.  4.1 Send a message to all clients that the game is over.  4.2 Record the final score in the database  4.3 Record the number of paddle hits for each player in the database  4.4 Redirect the user to the Game Over screen.  4.5 Change the game status to “Complete” | |
| Exception Conditions: | 1.1 If a player accidently closes the browser, the game will proceed, and their paddle will not move until they return. The game does not end for the other players. They can rejoin the game by logging back in and visiting the game room, at which point they will be automatically redirected to the game board. |