Implementation of Board Game using MQTT

In this assignment, you will be creating a Game using MQTT. This will be similar to basic multiplayer games you play on mobile phones.
You can design the application the way you want. You are welcome to use any innovative ideas/features in the application. You can choose C/C++/Python to code and any kind of interface to show your running application. You can introduce any new information/idea that is required in your application. Your application should support the following features. MQTT broker will act as a game server.

Game Rules:

1. The game consists of a 500x500 grid (numbered 0 to 499).
2. N players will join the game.
3. Each player can occupy any cell at a time. (No two players occupy the same cell at a given time)
4. The player can teleport to any location on the grid.
5. The player has a power, which when activated, will kill any player in adjacent/neighbouring cells.
6. If both players have their power activated, nothing happens.
7. The game is played till only 1 player is left.

Input:

1. You will be provided with N input files - one for each player.
2. Files will be named as <player-x.txt>. E.g. player-1.txt
3. First-line contains the number of players that will play the game. (Same in each file)
4. After that each line contains 3 numbers <x_coordinate, y_coordinate, power_status> of the player (0 - power not activated, 1 - power activated). E.g <102, 314, 0>, <220, 76, 1>
5. You can assume that there will always be sufficient input lines for the game to finish.
6. Sample Input With only 2 player- Player 1 wins the following game:

player-1	player-2
2 2 2 0 3 7 0 10 5 1 4 7 0 6 8 1	2 5 3 1 7 2 0 11 5 1 10 3 1 6 7 0

Output and Player Flow:

1. After connecting to the server, the player will wait till all other players have joined.
2. The game starts once all the players have joined.
3. Each player updates its location and power status to the server.
4. Each player subscribes to the location and power status (or any other necessary data) of all other players.
5. Player checks if any other player is adjacent to it with activated power and its own power is not activated; If yes, the player dies and disconnects from the server after updating necessary information
6. All other players should know that a player died and who killed it and reduce the number of alive players. E.g. player-7 was killed by player-3
7. Once N-1 players have died, the winner should know it’s the only one left and he is the winner and should print the same.