

- Describe next Tic Tac Toe Sprint Requirements as defined below
- Functional / Data Requirements:
 - Players
 - Create their own accounts on the server
 - Username (must be unique)
 - Password / Confirm Password
 - First / Last Name
 - Update their accounts
 - Change their name and/or password
 - Username can be changed, but must be unique at the time it is modified
 - Delete their accounts (Soft/Lazy deletion)
 - View the Game History for every game they have played and the player's current W-L-T record
 - Game / Game History
 - Start / End Time
 - Player that Created / Started the game
 - Players involved in the game
 - Human or Computer for each player involved
 - Game Viewers – a list of all players that are / were viewing the game but cannot make moves
 - A log of each move made in the game and who made it and the date/time the move was made.
 - Player that won the game or if the game ended in a tie
 - Unique id for the game (good idea to autogenerate this and make sure it is unique)
 - Game Server
 - Manages all games
 - UI at a minimum should show a list of all active games, a list of all completed games, a list of all registered players in the system.
 - Should be able to drill down into any game (active or completed) and see all the Game details as mentioned above
 - Should be able to see and modify player information
 - Should be able to see a list of all active connections (player connections) and the game id of the game they are currently playing or viewing (if any)
 - Workflow:
 - Players REGISTER with the Game Server to Create their accounts
 - Once a player is registered, they can SIGNIN to the Game Server to see a list of active games to join, create a game, view their game history and record, or change their preferences
 - Player can SIGNOUT from the Game Server to disconnect
 - Game Play Scenarios:

- Player A CREATES a game. The Game is created on the Game Server.
 - Player B JOINS the game. The Game then starts.
 - Player C can choose to join the game as a VIEWER
 - As a player makes a move on their screen, the move is executed on the Server and if valid, propagated to all observers
 - Server will notify all observers when the game is over
- Technical Requirements
 - Database storage
 - Microservices Architecture
 - Design Patterns
- Approach
 - Design / Architecture:
 - Think in terms of isolated modules and communication via message passing
 - Identify the key components of your system. It may help to start with the UI. Draw it out, but keep server and client separate
 - Identify the types of messages PUBLISHED (SENT) by each module and the types of messages each module should SUBSCRIBE TO (LISTEN FOR). This will help you come up with a collection of message types. Don't be too concerned about what goes IN the messages at first.
 - Due at our next class meeting. I will review each one. Make sure you think this through in detail.
 - Deliverables / Implementation:
 - Implement USER REGISTRATION / SIGNIN / SIGNOUT / USER PREFERENCE functionality. This includes server's ability to display all connected users (2 weeks)
 - Implement Game Logic flow (2 weeks)
 - Daily Standup Calls:
 - Did you get done what you said you would for today?
 - What are you going to do tomorrow?
 - Any obstacles in your way?
- Understanding Microservices Architecture
 - <https://microservices.io/>
 - Highly maintainable and testable
 - Loosely coupled
 - Independently deployable
 - Organized around business capabilities
 - Owned by a small team