

Software requirements specification (SRS)

- Introduction

Tic Tac Toe is a two-player (two persons or one player with computer) game played on a 3x3 grid. Players take turns marking a cell in the grid with their respective symbols (X or O). The player who succeeds in placing three of their symbols in a horizontal, vertical, or diagonal row wins the game. If all nine cells are filled without a winner, the game is considered a draw.

- Function requirements

- The game displays a 3x3 grid for the game board.
- The game allows playing with a friend or with computer
- The game allows the players to log in with unique username and password
- The game shall display which player's turn it is.
- The game shall provide a way to restart the game.
- The game shall display a message indicating the winner or if the game is a draw.

- Nonfunctional requirements

- The game shall ensure secure communication between the client and server (encrypt the user password and give each player a unique username)
- The game shall ensure that all game state data is stored correctly and consistently.
- The game has the history for each user
- Nothing happens or changes if you press the space outside the grid 's space

- Rules of the game

- The game is played on a 3x3 grid
- Player 1 uses the symbol X, and Player 2 uses the symbol O
- Players take turns placing their symbols in an empty cell
- A player wins by being the first to have three of their symbols in a horizontal, vertical, or diagonal row.
- If all nine cells are filled and no player has three in a row, the game is a draw
- The game shall not allow a cell to be marked more than once

- System behavior

- The players can play as a guests or log in with unique username and password
- The current player selects an empty cell
- The system marks the cell with the player's symbol
- The system checks for a winning and drawing condition
- The system displays the final game board and who won and lost or draw
- The data and history for each player is saved

- Performance

- The game registers player inputs within milliseconds
- The game updates the display within milliseconds of a player's move
- The game log In, checking and displaying wining conditions in milliseconds