Tic-Tac-Toe Game

Introduction

This project is a web-based Tic-Tac-Toe game, where two players can play against each other in a classic 3x3 grid. Players register and log in to play, and their data is securely stored. The game features a responsive user interface, real-time move validation, and winning/draw detection.

Technologies Used

Backend: Node.js - to handle user management and API endpoints.

Database: MySQL - to store user data and game records.

Frontend: React with TypeScript – for a responsive, interactive interface with game logic.

Features

User Registration/Login: Players register before playing, and their details are stored in MySQL.

Game Board: A 3x3 grid where players place their "X" or "O" symbols.

Turn-Based System: Players alternate turns, with moves validated to prevent overwrites.

Winning/Draw Detection: Checks for three consecutive symbols in any direction or a draw when the grid is full.

Setup & Installation

Database Creation:

Step 1: Create Database(tictactoe) and use that Database.

```
CREATE DATABASE tictactoe;

use tictactoe;
```

Step 2: Create table users using

```
CREATE TABLE users (

    id INT NOT NULL AUTO_INCREMENT,

    username VARCHAR(50) NOT NULL UNIQUE,

    password VARCHAR(50) NOT NULL,

    PRIMARY KEY (id)

);
```

Backend:

Step 1: Install Node.js and dependencies (npm install).

Step 2: Configure MySQL credentials in the .env file.

Step 3: Run the server (node server.js).

Frontend:

Step 1: Install React dependencies (npm install).

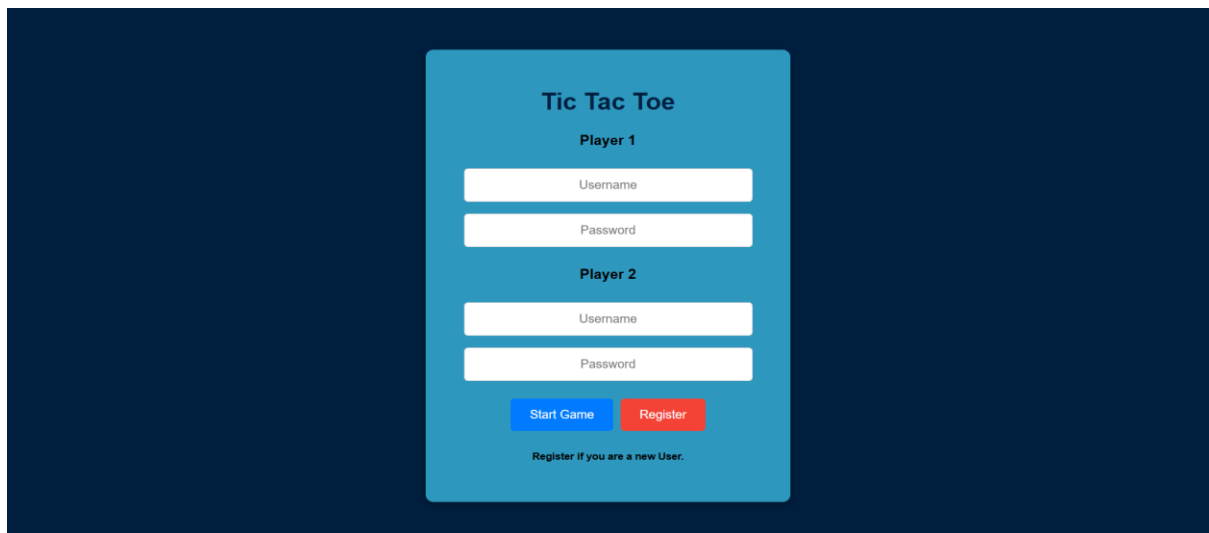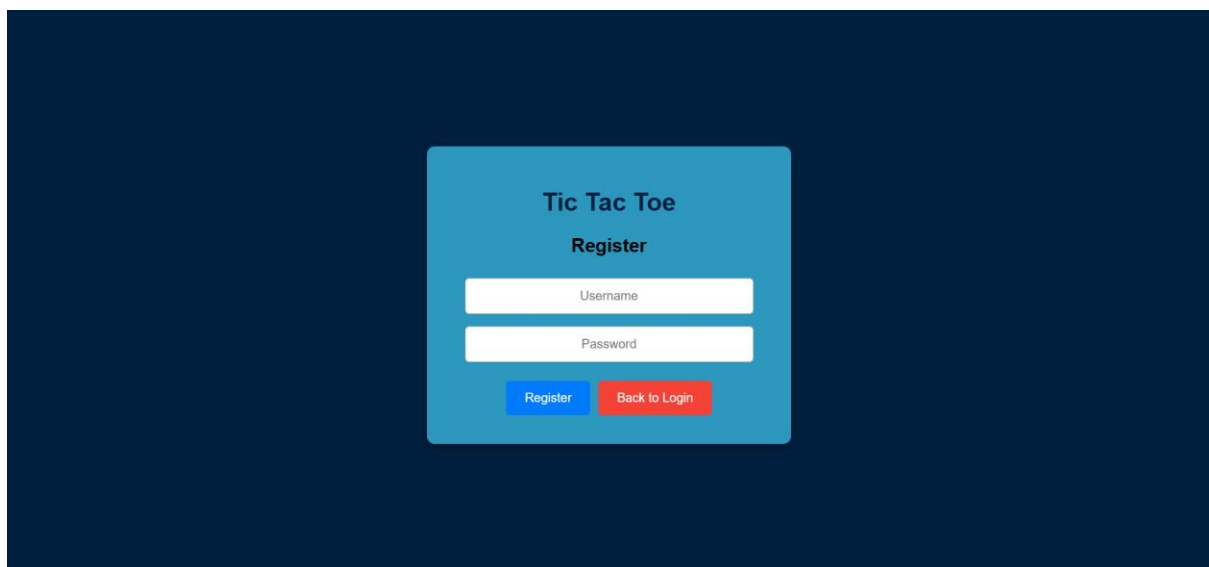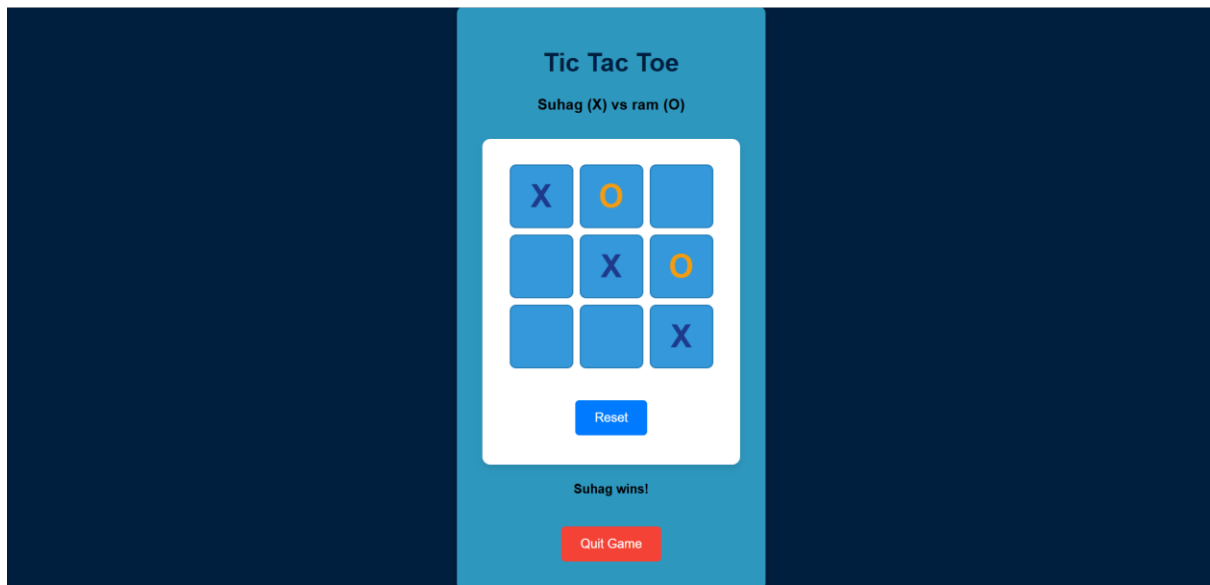Step 2: Start the React app (npm start).

Screenshots:

Fig 1: Login Page
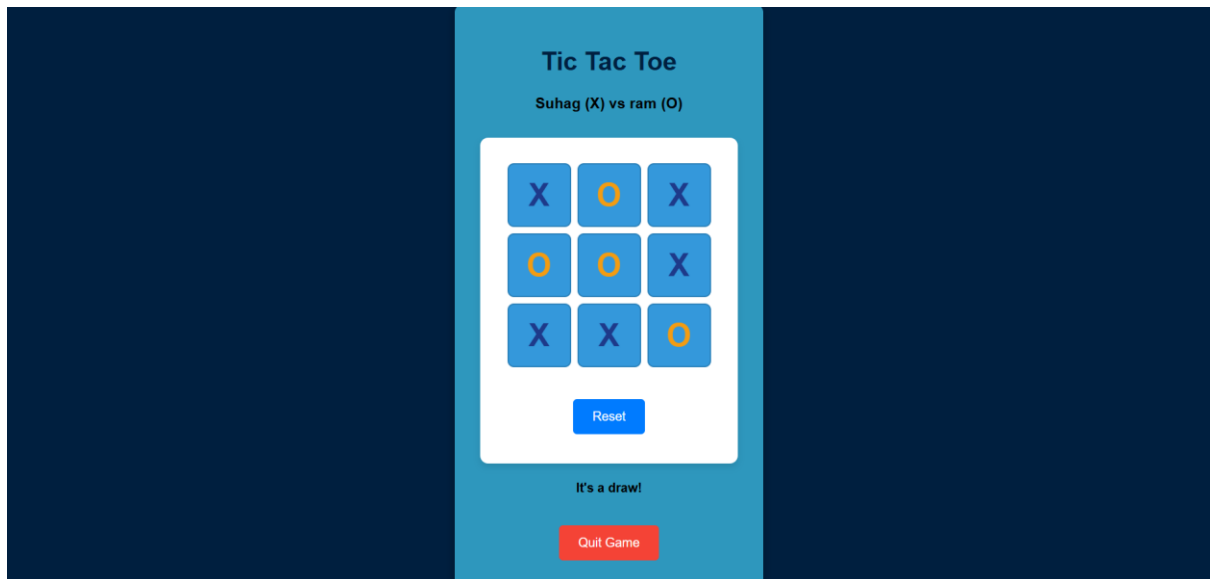

Fig 2: Register Page

Fig 3: Winning

Fig 4: Draw