Software Requirements Specification (SRS)

Project Title: XO Time

Prepared by: Dipsana Roy

1. Introduction

1.1 Purpose

The purpose of this project is to develop a **web-based Tic-Tac-Toe game** that allows two players to compete by taking turns marking spaces on a 3x3 grid. The game includes:

- Interactive gameplay features
- Dark mode toggle for better user experience
- Reset game button

This project serves both as an **entertainment application** and an **educational project** for learning HTML, CSS, and JavaScript.

1.2 Scope

The Tic-Tac-Toe game is designed for **casual two-player gameplay** in a web browser. Key features include:

- Clean and interactive UI
- Display of player turns, win, and tie conditions
- Dark mode for comfortable viewing
- Reset functionality to restart the game

The game can also serve as a **foundation for future enhancements**, such as online multiplayer gameplay or AI opponents.

1.3 Definitions, Acronyms, and Abbreviations

- **Tic-Tac-Toe**: A two-player game where participants take turns marking X or O on a 3x3 grid.
- **Dark Mode**: A UI setting with a dark background for improved readability and reduced eye strain.
- **UI**: User Interface.
- **FR**: Functional Requirement.
- **NFR**: Non-Functional Requirement.

1.4 References

- No external references are used for this project.

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2. Overall Description

2.1 Product Perspective

This is a **standalone web-based game** built with standard web technologies: **HTML, CSS, and JavaScript**. It does **not require server-side components**, making it light-weight and easy to run on any modern web browser.

2.2 Product Features

- Two-player gameplay
- Display of current player and game result messages (win/tie)
- Tie condition detection
- Dark mode toggle for improved viewing
- Reset game functionality

2.3 User Classes and Characteristics

- **Casual users** familiar with web browsing
- Users of all ages who enjoy simple, interactive games

2.4 Operating Environment

- Modern web browsers (Chrome, Firefox, Edge, Safari)
- Desktop and mobile devices

2.5 Design and Implementation Constraints

- No back-end integration
- Simple UI with minimal animations
- JavaScript must be enabled for gameplay

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3. Functional Requirements

ID	Requirement Description
FR1	Display a 3x3 grid as the game board.

FR2	Allow players to take turns marking X and O.
FR3	Detect and display a winner or tie.
FR4	Provide a reset button to restart the game.
FR5	Allow switching between light and dark mode.

Future considerations: Support for online multiplayer gameplay and AI opponents.

4. Non-Functional Requirements

ID	Requirement Description
NFR1	Responsive design compatible with all screen sizes.
NFR2	Intuitive and user-friendly UI.
NFR3	Fast loading and smooth gameplay without delays.
NFR4	Dark mode preference persists until toggled back.
NFR5	Minimal resource usage; works on low-spec devices.

5. System Requirements

- Modern web browsers: Chrome, Firefox, Edge, Safari
- No special hardware requirements
- Internet not required for basic gameplay

6. User Interface Requirements

- **Game Board**: 3x3 interactive grid
- **Dark Mode Toggle**: Button to switch between themes
- **Reset Button**: Restart the game at any time

- **Player Messages**: Display current player and game result (win/tie)

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7. Assumptions and Dependencies

- Players will have **JavaScript enabled** in their browsers.
- The game does not store data **persistently** between sessions.
- Future multiplayer functionality may require **server-side support**.

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8. Visual Preview