# Tic-Tac-Toe Game Project Report

**1. Introduction**

The Tic-Tac-Toe game is a simple and classic two-player game. In this project, we have developed a web-based version of Tic-Tac-Toe using HTML, CSS, and JavaScript. The game allows two players to compete against each other on a 3x3 grid. The player who succeeds in placing three of their marks in a horizontal, vertical, or diagonal row wins the game.

**2. Objective**

The main objective of this project is to create a functional and interactive Tic-Tac-Toe game using web technologies. It aims to provide a user-friendly interface where two players can play the game, and the system will determine the winner or declare a draw.

**3. Features**

- Two-player mode: Players take turns marking their spots on the grid.

- Game board: 3x3 grid where players place their marks (X and O).

- Win detection: Game detects a win when a player has three marks in a row.

- Draw detection: Game declares a draw if all spots are filled without a winner.

- Reset functionality: Players can reset the game to start a new match.

**4. Technologies Used**

- HTML: Used to create the structure of the game.

- CSS: Used for styling the game interface.

- JavaScript: Used to implement the game logic and interactivity.

**5. How to Play**

1. The game starts with player 'X' making the first move.

2. Players take turns clicking on an empty cell in the grid to place their mark.

3. The first player to align three marks in a row (horizontal, vertical, or diagonal) wins.

4. If all cells are filled without any player winning, the game ends in a draw.

5. To play again, click the 'Restart' button.

## 6. File Structure

The project directory is organized as follows:

```
tic-tac-toe/
|
|-- index.html      # Main HTML file for the game
|-- style.css       # Stylesheet for styling the game
|-- script.js       # JavaScript file containing game logic
```

## 7. Conclusion

The Tic-Tac-Toe game project is a simple yet effective demonstration of using web technologies to create an interactive and enjoyable user experience. It covers essential concepts such as event handling, dynamic content manipulation, and basic game logic.