**Tic-Tac-Toe Multiplayer Problem Statement** --- 10/23/2024 [revised]

* ***Team Simplify*** 
  + Argjend, John, Hazal, Leif, Gary, Dave, Zack, Joseph

Tic-Tac-Toe is a timeless game enjoyed by people everywhere, but many current versions lack the excitement and interaction modern video game players crave. Our team presents a fresh solution: a multiplayer Tic-Tac-Toe experience designed to bring players together, whether they’re friends or new opponents. Our version will allow for multiplayer, single player and an AI competitor for users to sharpen their skillset.

**The Problem Domain**

At its core, Tic-Tac-Toe is simple: it’s a game where two players take turns marking a grid with their symbols, aiming to align three in a row. This fundamental simplicity is part of its charm, but it also limits replay ability. In the modern gaming era, players seek deeper engagement—games that not only challenge their skills but also provide opportunities for social interaction, customization, and progress tracking. Most existing versions of Tic-Tac-Toe lack these elements, reducing the game to a quick, often trivial, experience that doesn’t hold attention for long.

**Our Solution**

We’re releasing an enhanced version of the classic game that’ll allow players to personalize their experience with customized themes, letting them change the appearance of the game board and pieces to match their style. Not to mention customizable music playing in the background to add ambiance. Players can also hone their skillset by playing against our AI computer. With varying levels of difficulty, a player will certainly learn from a mistake or two against the AI. By offering a social, customizable, and competitive platform, we aim to turn Tic-Tac-Toe into more than just a quick game—it's now a fun, engaging way to connect with others and showcase your skills. Our solution addresses the need for more interactive and customizable gameplay, turning a simple game into a richer, more enjoyable experience.

**Scenarios of Engagement**

A player begins the game by playing a quick match during their lunch break. Instead of a standard grid, they choose a futuristic, cyberpunk-themed board with neon-lit X’s and O’s. Increasing the overall beauty of the traditional game with flair from the players choice.

In another scenario, a group of friends might use the game to stay connected during busy times. They arrange friendly tournaments, testing out different themes and boards, with each match being a mix of lighthearted fun and competition. Even if one player loses, they’re eager to challenge their friends again, thanks to the personalized experience and the social aspect of multiplayer mode.   
  
The last scenario can be described as the player who wants to sharpen their skillset. By competing against our AI opponent and varying levels of difficulty, they’ll have the perfect practice tool to get ahead of the competition. Thanks to the variety of difficulties, the player will learn from their mistakes and improve to be a contender against their friends.