Tic Tac Toe(game)

PEAS:

Performance measure: The agent always makes valid moves, agent can play the game.

Environment: 3x3 board.

Actuators: Human, the opponent, the ENTER button/click.

Sensors: The opponent's movement, The codes.

ODESA-D:

Observability: fully observable.

Deterministic: strategic.

Sequential.

Static: static.

Agent: multi-agent.

Discrete: discrete.

Agent Type:

Goal-based reflex agent.

Problem Formulation:

State: **The game is played on a grid that is 3 squares by 3 squares and if**

You are X, your computer is O, Players take turns putting their marks in empty squares.

The first player to get 3 of her marks in a row (up, down, across, or diagonally) is the winner.

When all 9 squares are full, the game is over.

Initial state: **tic-tac-toe game starts with an empty 3x3 board.**

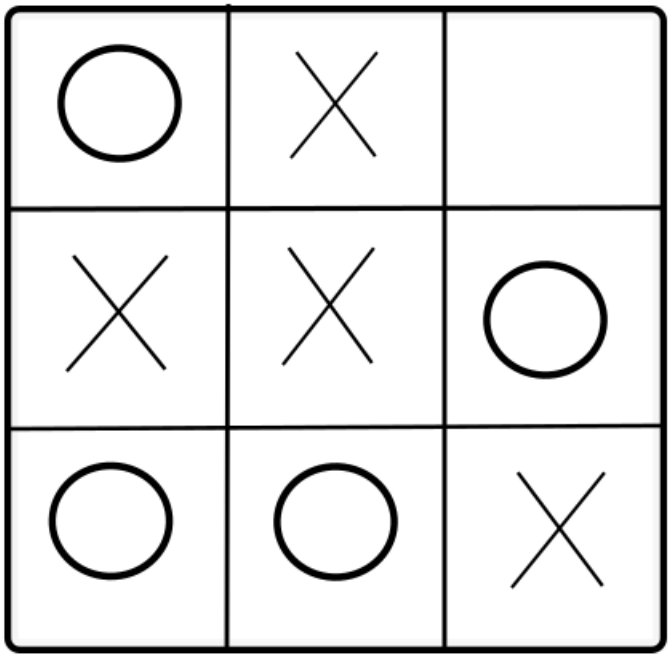
Actions: **up, down, left, right … , put our marks in any empty cell.**

Transition model: **placing X's and O's and players take turns marking X or O in empty cells by actions.**

Goal: **The goal of the game is for players to position their marks so that they make a continuous line of three cells vertically, horizontally, or diagonally. when all cells are full the game over.**

Path cost: **number of steps (each step costs a value of 1).**

GUI:



Tree: