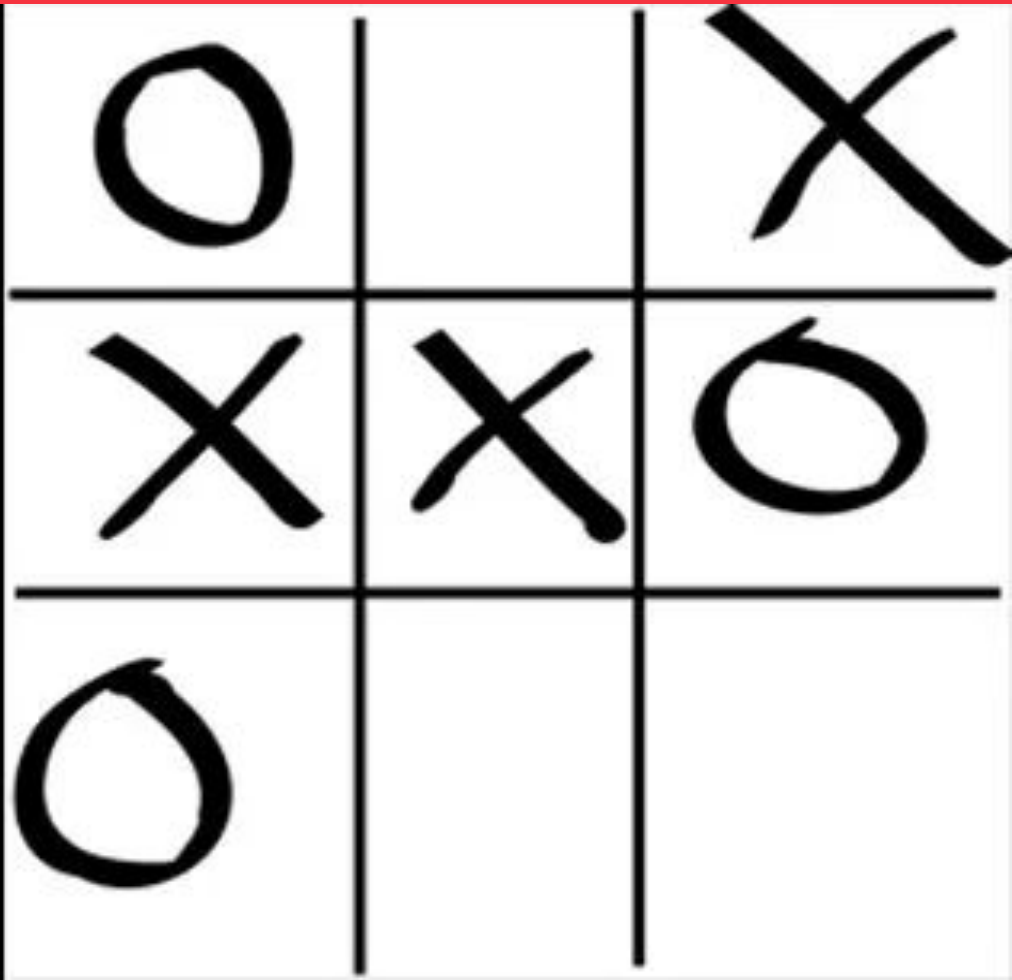

upGrad
Campus

Course: Python Projects - IV

Project On: Tic Tac Toe

Tic Tac Toe



Problem Statement

- Tic-Tac-Toe is very popular and is quite simple in itself. It is a two-player game. In this game, there is a board with 3×3 squares. You will have to use the popular Pygame library for rendering graphics on a display window.

- In this game a player can choose between two symbols with his opponent, the usual games use “X” and “O”. If the first player chooses “X”, then the second player must play with “O” and vice versa.

Problem Statement

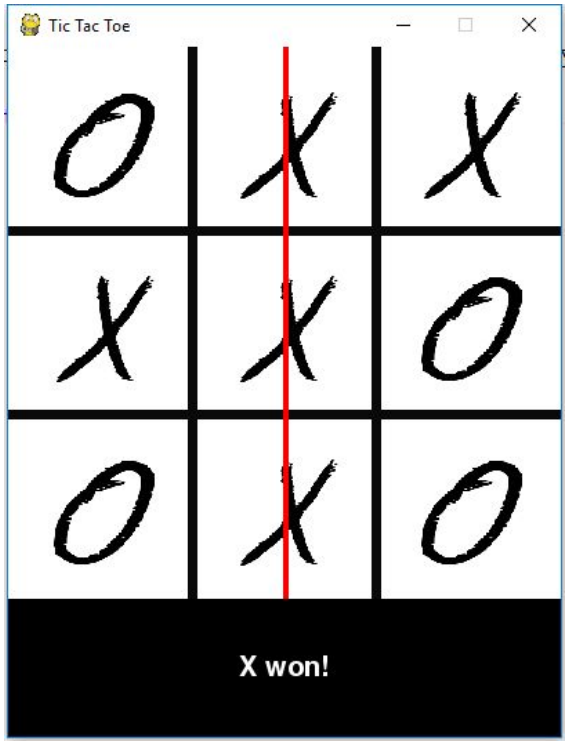
- A player marks one of the 3×3 squares with his symbol (perhaps “X” or “O”) and he aims to create a straight line horizontally or vertically or diagonally with two intensions:

    1. Create a straight line before your opponent to win the game.
    2. Prevent his opponent from creating a straight line first.

- If no one can logically create a straight line with its symbol, the game ends in a tie. So there are only three possible outcomes: one player wins, his opponent (human or computer) wins, or there is a tie. You will prepare this Tic Tac Toe GUI with Python for two players.

Tasks

- Use Pygame library to build Tic-Tac-Toe game in python.
- Create the display window for our game.
- Draw the grid on the canvas where you will play Tic-Tac-Toe.
- Draw the status bar below the canvas to show which player's turn is it and who wins the game.
- When someone wins the game or the game is a draw then reset the game.
- You need to run our game inside an infinite loop. It will continuously look for events and when a user presses the mouse button on the grid we will first get the X and Y coordinates of the mouse. Then we will check which square the user has clicked. Then we will draw the appropriate 'X' or 'O' image on the canvas.

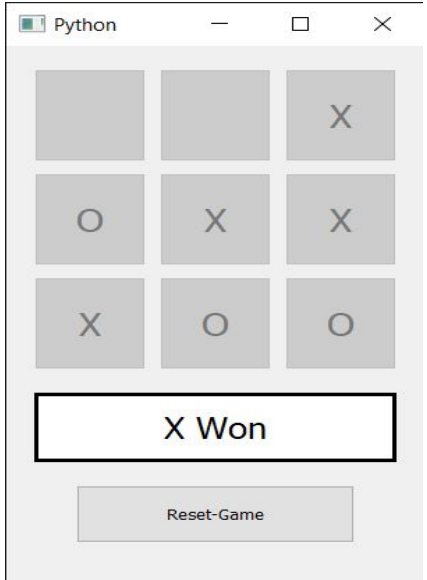


Test Case

Test Case:

Input: A GUI Screen should be created like this.

Output: Winner should be declared and the game should reset.



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All The Best!