Data Structures:

Board:	A 9 element Matrix representing the board where each element is represented by a number- 2(indicating blank), 3(indicating X), 5(indicating O).
Turn :	An integer indicating which move of the game is about to be played; 1 indicates the first move, 9 indicates the last.

Algorithm:

The main algorithm uses three sub procedures:

Make2:	Returns 5 if the center square of the board is blank, that is, if board[5] = 2, Otherwise this function returns any blank non-corner square.
Posswin(p):	Returns 0 if player p cannot win on its next move, otherwise returns the number of the square that constitutes the winning move. This function will enable the program both to win and block the opponents winning move. It works by checking, one at a time, each row, column and diagonals. It can check for the possible win by multiplying the values of the squares. If the product is 18 (3 * 3 * 2), then X can win. If the product is 50(5 * 5 * 2), then O can win.
Go(n):	Makes a move in square n.

Follow the link to find how the computer plays a winning strategy every time:

Winning Strategy for Tic-Tac-Toe