

# Tic-Tac-Toe

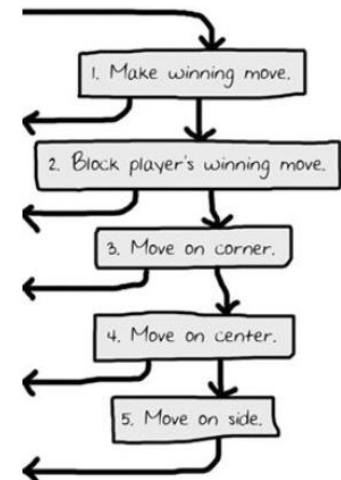


<b>7</b>	<b>8</b>	<b>9</b>
<b>4</b>	<b>5</b>	<b>6</b>
<b>1</b>	<b>2</b>	<b>3</b>
Corner	Side	Corner
Side	Center	Side
Corner	Side	Corner

# The AI's algorithm



- 1 see if there's a move the computer can make that will win the game.
  - ❖ If there is, take that move. Otherwise, go to step 2
- 2 See if there's a move the player can make that will cause the computer to lose the game.
  - ❖ If there is, move there to block the player. Otherwise, go to step 3.
- 3 Check if any of the corner spaces
  - ❖ (spaces 1, 3, 7, or 9) are free. If so, move there.
  - ❖ If no corner piece is free, then go to step 4.
- 4 Check if the center is free.
  - ❖ If so, move there. If it isn't, then go to step 5.
- 5 Move on any of the side pieces
  - ❖ (spaces 2, 4, 6, or 8). There are no more steps, because if the execution reaches step 5 the side spaces are the only spaces left.



# Functions

## ➤ ToTboardDraw

- ❖ Nine spaces for each
- ❖ Test it
- ❖ Coins as list/array

## ➤ Playerinput

- ❖ Check for X, O as chosen by player

## ➤ Fullboard

## ➤ winner

## ➤ Computermove

- ❖ Iterate AI algo for computer win
- ❖ Iterate AI algo for blocking player
- ❖ Occupy one of the corner..

## ➤ Random\_selection

- ❖ X, O
- ❖ One in list, corners

## ➤ playagain

## ➤ winner