Ticktacktoe pseudocode:

display the menu to the user prompts the user for menu input

1. choice will be 1 then the user plays with another user.
2. choice will be 2 if the user wants a game against the computer.

1.1. A blank board is set up and displayed to screen using a 2D array

1.1.1 on screen, a 3 by 3 grid

1.1.2. The grid is then filled with 'A's is created to show them the available squares that they a can fill

1.2 Player 1 is given the symbol 'X' and is prompted to enter an x co-ordinate

1.2.1 the program takes in that value and assigns it to the variable 'row'

1.2.2 program prompts the user for a y value and assigns that to

the variable 'column'

1.3 The function PLAYER spacecheck is called (to check if that point in the array is free)

1.3.1 it brings in the row and column values that the user entered

1.3.2 if the co-ordinates entered DO NOT have the letter 'A' in that

space then the user is told that the space is already in use

1.3.3 they are then prompted to re-enter the x and y values for row

and column until they enter the co-ordinates to a point

that is valid

1.4 Checks if the user has won the game

1.4.1 if the user has 3 symbols in a horizontal line then the user wins

1.4.2 if the user has 3 of their symbols in a vertical line then the user wins

1.4.3 if user has 3 of their symbols in a diagonal line then they win.

1.4.4 if they have not won by the end of the check the board updates

with the recently entered co-ordinates and then prints it to screen

1.5 it then asks the second player, who is assigned the character 'O' for their x- co-ordinate and their y co-ordinate.

1.3 the PLAYER space check is used

1.4 the win checks are used and called with O's values the program then loops, until one of the players wins.

1.6 when a player wins, the board is reset and displayed to the user

1.6.1 the user is then asked to enter their x and y co-ordinates like last time

1.6.2 if the user enters '-1' for the row co-ordinate and '-1' for the column then the game ends and the program ends

1.6.3 if this doesn’t happen then the program runs as normal and continues to let the two users play

//////////////////////////////////////comp vs player\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\

2.11.1. A blank board is set up and displayed to screen using a 2D array

2.1.1 on screen, a 3 by 3 grid

2.1.2. The grid is then filled with 'A's is created to show them the available squares that they a can fill

2.2 Player 1 is given the symbol 'X' and is prompted to enter an x co-ordinate

2.2.1 the program takes in that value and assigns it to the variable 'row'

2.2.2 program prompts the user for a y value and assigns that to

the variable 'column'

2.3 The function space check is called (to check if that point in the array is free)

1.3.1 it brings in the row and column values that the user entered

1.3.2 if the co-ordinates entered DO NOT have the letter 'A' in that

space then the user is told that the space is already in use

2.3.3 they are then prompted to re-enter the x and y values for row

and column until they enter the co-ordinates to a point

that is valid

2.4 Checks if the user has won the game

1.4.1 if the user has 3 symbols in a horizontal line then the user wins

1.4.2 if the user has 3 of their symbols in a vertical line then the user wins

1.4.3 if user has 3 of their symbols in a diagonal line then they win.

1.4.4 if they have not won by the end of the check the board updates

with the recently entered co-ordinates and then prints it to screen

* 1. it then asks the computer, who is assigned the character 'O' for their x- co-ordinate and their y co-ordinate. However, it doesn’t display this to screen (only thing being displayed to the user will be that a message saying it’s the computer’s turn)
     1. assigns the x- co-ordinate of the computer to a random dumber between 0-2 and does the same with the y -coordinates
     2. these values are set to row and column

* 1. the COMPUTER space check is used.
     1. while the co-ordinates are equal to a place on the board that is occupied
     2. row and column will be assigned 2 new random numbers
     3. it will then check if those co-ordinates are free
     4. repeats until the co-ordinates entered are set to a free space on the board
     5. while the co-ordinates entered are free (if they do not contain the character ‘A’)
     6. if they are free then they will be set on the board.

2.7 the win checks are used and called with O's values. the program then loops until, one of the players wins.

2.8 if a player wins, the board is reset and displayed to the user

2.8.1 the user is then asked to enter their x and y co-ordinates like last time

2.8.2 if the user enters '-1' for the row co-ordinate and '-1' for the column then the game ends and the program ends

2.8.3 if this doesn’t happen then the program runs as normal and continues to let the two users play