

Tic Tac Toe

- There are two players for the game.
- The goal of the game is to get three noughts or crosses aligned within a 3x3 grid.
- This can occur horizontally, vertically or diagonally.
- If there no noughts or crosses aligned, the players have drawn and the game starts again.

Coding Structure

The Data structure we will use will be a 2D array, Lists

The constants are the 0 X as the are the only symbols within the game

The variables are the coordinates of the 0 and X

User can input a coordinate within the 3x3 grid to place their symbol

Variables	Datatype	Description
Grid Coordinates	integers	This variable allows the user to allocate their symbol in the 3x3 grid
Score	Integer	This will store the amount of rounds the user has won
Game Checker	Boolean/While loop	This will check who is the winner and loser of the game and if it is a draw
To continue playing or to stop (Yes/No)	String/boolean?	This will allow the user to decide whether they want to continue playing or to stop
Grid	Function	Whenever this function is called it will show a blank grid

Data Structure

Data Structure	Purpose
2D Arrays	This used to display the grid to the user in a neat format

User Interface

User interacting with the program	Messages received
Finishing the game	Win, lose or draw
Clicking on game	X or O will appear on the place they clicked
Choosing the symbol they want	Size of the symbol enlarges/ring appears around the symbol
Multiplayer or Singleplayer(Ai)	User plays game against chosen player

Test Plan

Test Num	Description of Test	Test data	Expected outcome
1	The grid for noughts and crosses appear when called	Normal data Function called	When the player want to play or restart a game a blank grid should appear
2	The user will be able to pick which symbol they want	Normal Data X or O	The size of the symbol enlarges
3	The user will be able to click on the grid to place down the symbol	Normal Data (coordinates) (0,1) Abnormal Data (2,1) Extreme (2,2)	The symbol should appear on the selected area
4	The user will have the option to continue playing or stop	Normal data Yes or No	If yes is chosen a blank grid should be displayed, if no the game would come to an end
5	The counter will count the amount of rounds the players have won	Normal Data Counter increases by 1 Extreme Counter stop when game ends	The counter to increase by 1 every a round has been won by one of the players