CODE DESCRIBTION

Our tic tac toe game code was written in c++. In our code we 1st declare a two dimension arrays with a variable name 'board', which is responsible for the display of the game.

* Variables declared in the code

- Choice : simply mean players choice

- Row & column : assign players choice to our ‘board’ array

-draw : determines which player won the game

- Turn : whose turn it is to make a move, in out case we have player ‘X’ and ‘O’.

After declaring our variables, we decided to have functions instead of just writing everything in the main functions, for simplicity hence we have multiple functions which are later called in the main function for coordinate execution. Our 1st function is ‘display’, which arrange the display of the game and at same time places our array at the right spot for the display of the assigned data/input as the game is being played.

Our second function is ‘Player\_turn‘, 1st made a mistake and gave it a name of ‘turn’ the I realized we already had that as a variable. Its main operation is to give data/input to the ‘choice’ variable, it 1st figure out whose turn it is via an IF\_STATEMENT and record the given move/input from the player into the ‘choice’ variable and test the input on a SWITCH\_STATEMENT, if and invalid input is entered it should display “Invalid move”. We therefore had another IF\_STATEMENT at the end of the function that assign data/input to the display which is the same as assigning data to the two-dimensional array and called the display function at the end of the function to link them so they can be able to share data.

We then have our last external function called ‘game-over’ as it explains itself, it calculates results via the combination of FOR\_LOOP and IF\_STATEMENT and at the end return if there`s a winner or it is a draw.

Lastly but not least, our MAIN\_FUNCTION, this is where all the magic happens, all the functions are called in MAIN so they can all run in cooperation. The functions are executed with a WHILE\_LOOP with a condition of the ‘GAME-OVER’ function. We then display the winner of the game using an IF\_STATEMENT to figure out who the winner is.

In our program you might see the following

* || = OR logic gate behaviour
* && = AND logic gate behaviour

CHALLENGES MET

Challenges I met while writing the code was that , I , individually was a bit long since I used c++ and it was the only language I knew from the options we had. Errors encounter were such that of calling functions in a wrong manner and being able to declare and operate the two dimensional array