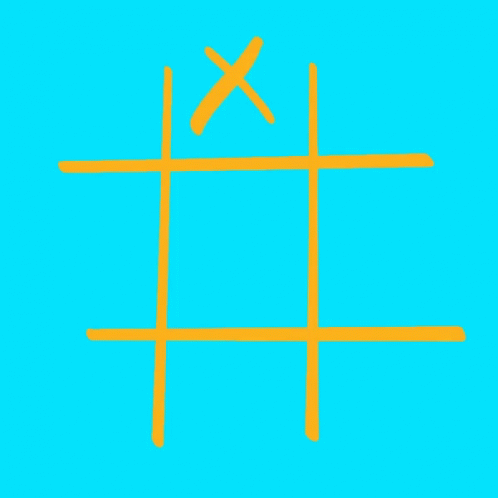
Python project: Tic-Tac-Toe

* **Challenge type: Consolidation**
* **Duration: 3 days**
* **Deadline**: **Monday 4.30 PM**
* **Team challenge** : solo

# Goal

Create a simple, text-based Tic-Tac-Toe game using Python. This project aims to help you build fundamental programming concepts and enhance your Python skills.

Tic-Tac-Toe is a classic two-player game that is played on a 3x3 grid. Players take turns placing their symbol ('X' or 'O') on the grid. The objective is to have three of the same symbol in a row, either horizontally, vertically, or diagonally. The first player to achieve this wins the game. If the grid is full and no player has achieved the objective, the game ends in a draw.



# Steps to complete

* Implement a function that sets up the board game by creating a 3x3 grid using a list of lists
* Implement a function that displays the grid for the players with row and column numbers to make it easier for them to choose their moves.
* Implement a function that manages a player move:
* Take user input for the row and column number where the player wants to place their symbol (each player had a symbol)
* Validate the input (ensure it's within the grid's range and that the cell is empty).
* Update the game board with the player's symbol.
* Implement a function that checks if there is a winner:
  + Check if of the players has won by having three of their symbols in a row (horizontally, vertically, or diagonally)
* Implement a function that checks for a draw:
  + If the game board is full and no player has won, declare the game a draw.
* Implement the main game loop:
  + Alternate between players until a winner is found or the game ends in a draw.
  + Display the final result (winner or draw)
* (Optional) Enhance the game:
  + Add basic error handling for invalid user input.
  + Implement a simple AI opponent for a single-player mode.
  + Improve the game's user interface with colors or other visual enhancements.

# Deliverables

* Create a folder in your learner space that contains:
* Your Google Colab notebook (use markdown for structuring your file)
* A report in the MD format that contains:
  + A description of the project
  + The structure of your code
  + Instructions: how to play the game?
  + (Visuals)
  + (Contributors)
  + (Timeline)
  + (Personal situation)

# Pedagogical objectives

Be able to implement basic Python programming concepts in a full project:

* Variables and data types
* Conditional statements
* Loops and iterations
* Functions and modular programming
* User input and output
* Basic error handling