**Tic-Tac-Toe**

**Concepts learned:**

* **2D lists:** The board is represented as a list of lists, giving students experience working with multidimensional arrays.
* **Loops:** The while loop continues until the board is filled or a player wins.
* **Functions:** The game is broken into smaller functions, such as check\_winner() and print\_board(), teaching students about modularity and code organization.
* **Input validation:** The game checks that the player enters valid rows and columns, teaching defensive programming.
* **Conditional logic:** The game has various conditions to check for valid moves and winning conditions.

**Key Learning Outcomes:**

* **2D arrays:** The board structure teaches the use of multidimensional arrays and how to iterate through them.
* **Function design:** The use of helper functions encourages modular programming.
* **Iteration:** Looping over the game grid and taking turns between two players.
* **Logical operators:** and, or, and not are used in checking the win conditions.