**Create a Tic-Tac-Toe game using python**

Tic-Tac-Toe is a classic two-player game where the goal is to get three of your symbols (either "X" or "O") in a row, column, or diagonal

Here's a simple implementation of a Tic-Tac-Toe game:

**Code:**

def print\_board(board):

for row in board:

print(" | ".join(row))

print("-" \* 9)

def check\_winner(board, player):

for row in board:

if all(cell == player for cell in row):

return True

for col in range(3):

if all(row[col] == player for row in board):

return True

if all(board[i][i] == player for i in range(3)) or all(board[i][2 - i] == player for i in range(3)):

return True

return False

def is\_board\_full(board):

return all(cell != ' ' for row in board for cell in row)

def main():

board = [[" " for \_ in range(3)] for \_ in range(3)]

current\_player = "X"

print("Welcome to Tic-Tac-Toe!")

while True:

print\_board(board)

row, col = map(int, input(f"Player {current\_player}, enter your row and column (e.g., 1 2): ").split())

if row < 1 or row > 3 or col < 1 or col > 3 or board[row - 1][col - 1] != " ":

print("Invalid move! Try again.")

continue

board[row - 1][col - 1] = current\_player

if check\_winner(board, current\_player):

print\_board(board)

print(f"Player {current\_player} wins! Congratulations!")

break

elif is\_board\_full(board):

print\_board(board)

print("It's a tie!")

break

current\_player = "O" if current\_player == "X" else "X"

if \_\_name\_\_ == "\_\_main\_\_":

main()

**output:**

**Welcome to Tic-Tac-Toe!**

**| |**

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**| |**

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**| |**

**Player X, enter your row and column (e.g., 1 2): 1 1**

**X | |**

**-----------**

**| |**

**-----------**

**| |**

**Player O, enter your row and column (e.g., 1 2): 2 2**

**X | |**

**-----------**

**| O |**

**-----------**

**| |**

**Player X, enter your row and column (e.g., 1 2): 1 2**

**X | X |**

**-----------**

**| O |**

**-----------**

**| |**

**Player O, enter your row and column (e.g., 1 2): 3 3**

**X | X |**

**-----------**

**| O |**

**-----------**

**| | O**

**Player X, enter your row and column (e.g., 1 2): 3 2**

**X | X |**

**-----------**

**| O |**

**-----------**

**| X | O**

**Player X wins! Congratulations!**

Creating a Tic-Tac-Toe game is a classic and fun project that can be enhanced with various features to make it more engaging. It's a great choice for a final project.