PYTHON INTERNSHIP

WEEK 4 TASK

Python code for a simple game: Tic-Tac-Toe

**Code:**

def print\_board(board):

for row in board:

print(" | ".join(row))

print("-" \* 5)

def check\_winner(board):

for row in board:

if row[0] == row[1] == row[2] != ' ':

return True

for col in range(3):

if board[0][col] == board[1][col] == board[2][col] != ' ':

return True

if board[0][0] == board[1][1] == board[2][2] != ' ' or board[0][2] == board[1][1] == board[2][0] != ' ':

return True

return False

def tic\_tac\_toe():

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

current\_player = 'X'

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

print("The game is played on a 3x3 grid. Players take turns placing their 'X' or 'O' on an empty spot.")

print("The player who gets three of their marks in a row, column, or diagonal wins the game.")

print("Let's begin!\n")

for \_ in range(9):

print\_board(board)

print(f"Player {current\_player}'s turn")

while True:

row = int(input("Enter row (0, 1, or 2): "))

col = int(input("Enter column (0, 1, or 2): "))

if 0 <= row < 3 and 0 <= col < 3 and board[row][col] == ' ':

break

else:

print("Invalid move. Try again.")

board[row][col] = current\_player

if check\_winner(board):

print\_board(board)

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

return

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

print\_board(board)

print("It's a draw!")

tic\_tac\_toe()

BY

NAMITHA RAMESH