EXPERIMENT 12

Write the python program for Tic Tac Toe game

CODE:

# Tic Tac Toe Game in Python

def print\_board(board):

for row in board:

print(" | ".join(row))

print("-" \* 5)

def check\_winner(board, player):

# Check rows, columns and diagonals

for row in board:

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

return True

for col in range(3):

if all(board[row][col] == player for row in range(3)):

return True

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

return True

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

return True

return False

def is\_full(board):

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

def tic\_tac\_toe():

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

players = ["X", "O"]

turn = 0

while True:

print\_board(board)

player = players[turn % 2]

print(f"Player {player}'s turn")

# Get valid move

while True:

try:

row = int(input("Enter row (0-2): "))

col = int(input("Enter col (0-2): "))

if board[row][col] == " ":

board[row][col] = player

break

else:

print("Cell already taken! Try again.")

except (ValueError, IndexError):

print("Invalid input! Enter numbers between 0-2.")

if check\_winner(board, player):

print\_board(board)

print(f"Player {player} wins!")

break

elif is\_full(board):

print\_board(board)

print("It's a draw!")

break

turn += 1

# Run the game

tic\_tac\_toe()

OUTPUT:

