```
# Function to print Tic Tac Toe
def print_tic_tac_toe(values):
  print("\n")
  print("\t     |     |")
  print("\t  {}  |  {}  |  {}".format(values[0], values[1], values[2]))
  print('\t_____|_____|_____')

  print("\t     |     |")
  print("\t  {}  |  {}  |  {}".format(values[3], values[4], values[5]))
  print('\t_____|_____|_____')

  print("\t     |     |")

  print("\t  {}  |  {}  |  {}".format(values[6], values[7], values[8]))
  print("\t     |     |")
  print("\n")


# Function to print the score-board
def print_scoreboard(score_board):
  print("\t--------------------------------")
  print("\t            SCOREBOARD       ")
  print("\t--------------------------------")

  players = list(score_board.keys())
  print("\t   ", players[0], "\t    ", score_board[players[0]])
  print("\t   ", players[1], "\t    ", score_board[players[1]])

  print("\t--------------------------------\n")

# Function to check if any player has won
def check_win(player_pos, cur_player):

  # All possible winning combinations
  soln = [[1, 2, 3], [4, 5, 6], [7, 8, 9], [1, 4, 7], [2, 5, 8], [3, 6, 9], [1, 5, 9], [3, 5,

  # Loop to check if any winning combination is satisfied
  for x in soln:
    if all(y in player_pos[cur_player] for y in x):

      # Return True if any winning combination satisfies
      return True
  # Return False if no combination is satisfied
  return False

# Function to check if the game is drawn
def check_draw(player_pos):
  if len(player_pos['X']) + len(player_pos['O']) == 9:
    return True
  return False
```

```
# Function for a single game of Tic Tac Toe
def single_game(cur_player):

  # Represents the Tic Tac Toe
  values = [' ' for x in range(9)]

  # Stores the positions occupied by X and O
  player_pos = {'X':[], 'O':[]}

  # Game Loop for a single game of Tic Tac Toe
  while True:
    print_tic_tac_toe(values)

    # Try exception block for MOVE input
    try:
      print("Player ", cur_player, " turn. Which box? : ", end="")
      move = int(input())
    except ValueError:
      print("Wrong Input!!! Try Again")
      continue

    # Sanity check for MOVE inout
    if move < 1 or move > 9:
      print("Wrong Input!!! Try Again")
      continue

    # Check if the box is not occupied already
    if values[move-1] != ' ':
      print("Place already filled. Try again!!")
      continue

    # Update game information

    # Updating grid status
    values[move-1] = cur_player

    # Updating player positions
    player_pos[cur_player].append(move)

    # Function call for checking win
    if check_win(player_pos, cur_player):
      print_tic_tac_toe(values)
      print("Player ", cur_player, " has won the game!!")
      print("\n")
      return cur_player

    # Function call for checking draw game
    if check_draw(player_pos):
      print_tic_tac_toe(values)
      print("Game Drawn")
      print("\n")
      return 'D'

    # Switch player moves
    if cur_player == 'X':
      cur_player = 'O'
    else:
      cur_player = 'X'

if __name__ == "__main__":

  print("Player 1")
  player1 = input("Enter the name : ")
  print("\n")

  print("Player 2")
  player2 = input("Enter the name : ")
  print("\n")

  # Stores the player who chooses X and O
  cur_player = player1

  # Stores the choice of players
  player_choice = {'X' : "", 'O' : ""}

  # Stores the options
  options = ['X', 'O']

  # Stores the scoreboard
  score_board = {player1: 0, player2: 0}
  print_scoreboard(score_board)

  # Game Loop for a series of Tic Tac Toe
  # The loop runs until the players quit
  while True:

    # Player choice Menu
    print("Turn to choose for", cur_player)
    print("Enter 1 for X")
    print("Enter 2 for O")
    print("Enter 3 to Quit")

    # Try exception for CHOICE input
    try:
      choice = int(input())
    except ValueError:
      print("Wrong Input!!! Try Again\n")
      continue

    # Conditions for player choice
    if choice == 1:
      player_choice['X'] = cur_player
      if cur_player == player1:
        player_choice['O'] = player2
      else:
        player_choice['O'] = player1

    elif choice == 2:
      player_choice['O'] = cur_player
      if cur_player == player1:
        player_choice['X'] = player2
      else:
        player_choice['X'] = player1

    elif choice == 3:
      print("Final Scores")
      print_scoreboard(score_board)
      break

    else:
      print("Wrong Choice!!!! Try Again\n")

    # Stores the winner in a single game of Tic Tac Toe
    winner = single_game(options[choice-1])

    # Edits the scoreboard according to the winner
    if winner != 'D' :
      player_won = player_choice[winner]
      score_board[player_won] = score_board[player_won] + 1

    print_scoreboard(score_board)
    # Switch player who chooses X or O
    if cur_player == player1:
      cur_player = player2
    else:
      cur_player = player1
```

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