Tic_Tac_Toe_Game

Funtion to print Tic Tac Toe Board

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In [1]: def tic_t_t(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")


        #Funtion to print the score-board for the game
        def scoreboard(score_board):
            print("\t-------------------------------------------")
            print("\t          SCORE BOARD FOR TIC TAC TOE        ")
            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")

        #funtion to chek if any players won the game
        def chek_winner(player_position,current_player):

            #all possible winning combination for player
            w_position=[[1,2,3],[4,5,6],[7,8,9],[1,4,7],[2,5,8],[3,6,9],[1,5,9],[3,5,7]]
            for x in w_position:
                if all(y in player_position[current_player] for y in x):

                    #return true if any winning combination is satisfied
                    return True
            #return false if above condition is not satisfied
            return False
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#funtion to chek if the game is draw
def chek_draw(player_position):
    if len(player_position["x"])+len(player_position["o"])==9:
        return True
    return False

#funtion for a single tic tac toe game
def single_game(current_player):

    #represent the tic tac toe
    values=[" "for x in range(9)]

    #store the postion occupied by x and o
    player_position={"x":[], "o":[]}

    #game loop for a single game of tic tac toe
    while True:
        tic_t_t(values)

        #try exception block for move input
        try:
            print("player",current_player," turn.which box? : ", end="")
            move=int(input())
        except ValueError:
            print("Wroung Input!!! Try Again")
            continue

        #sanity chek for move input
        if move < 1 or move > 9:
            print("please chose the right input between 1 to 9 ")
            continue

        #chek if the cell is occupied or not
        if values[move-1] != " ":
            print("the place you have chose is already filled. Try again!!")
            continue

        #update game status
        #update board status
        values[move-1]=current_player

        #update player position
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        player_position[current_player].append(move)

        #funtion call for cheking winner
        if chek_winner(player_position,current_player):
            tic_t_t(values)
            print("player",current_player,"has won the game!!")
            print("\n")
            return current_player

        #funtion call for chekin draw game
        if chek_draw(player_position):
            tic_t_t(values)
            print("game is Draw")
            print("\n")
            return "D"

        #switch player moves
        if current_player=="x":
            current_player="o"
        else:
            current_player="x"

if __name__ == "__main__":
    print("Player 1 Details")
    player1=input("Enter the name of the player : " )
    print("\n")

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

    #store the player who chooses x and o
    current_player=player1

    #store the choise of the player charecter
    player_choice={"x" : "", "o" : ""}

    #store the option

    options=["x","o"]

    #stores the score board details
```

```python
score_board={player1: 0, player2: 0}
scoreboard(score_board)

#Game loop for a series of tic tac toe
#the loop runs until either of the player choose to quite
while True:
    #player choice menu
    print("Turn to choose for", current_player)
    print("Enter 1 for x")
    print("Enter 2 for o")
    print("Enter 3 for quit")

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

    #condition for choice
    if choice==1:
        player_choice["x"]=current_player
        if current_player==player1:
            player_choice["o"]=player2
        else:
            player_choice["o"]=player1

    elif choice==2:
        player_choice["o"]=current_player
        if current_player==player1:
            player_choice["x"]=player2
        else:
            player_choice["x"]=player1
    elif choice==3:
        print("Final scores")
        scoreboard(score_board)
        break
    else:
        print("wrong choice!!!! Try Again\n")

    #store the winner in a single game of tic tac toe
    winner=single_game(options[choice-1])
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```python
        #scoreboard edit according to winner
        if winner !="D":
            player_won=player_choice[winner]
            score_board[player_won]=score_board[player_won]+1
        scoreboard(score_board)
        #switch player who choose x and o
        if current_player==player1:
            current_player=player2
        else:
            current_player=player1
```

Player 1 Details
Enter the name of the player : w

Player 2 Details
Enter the name of the player : y

                    SCORE BOARD FOR TIC TAC TOE
        ----
            w   0
            y   0

Turn to choose for w
Enter 1 for x
Enter 2 for o
Enter 3 for quit

In [ ]: