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import random
import time
import sys
n=[j for j in range(1,10)]
board=[" " for i in range(9)]
print("Welcome to the game TIC-TAC-TOE")
pt=[]
db=[]
def print_board():
    row1="| {} | {} | {} |".format(board[0], board[1], board[2])
    row2="| {} | {} | {} |".format(board[3], board[4], board[5])
    row3="| {} | {} | {} |".format(board[6], board[7], board[8])
    print(row1)
    print(row2)
    print(row3)
    print()
def player_move(icon):
    if icon=="X":
        number=1
    elif icon=="O":
        number=2
    print("your turn player {}".format(number))
    try:
        choice1=int(input("Enter your move(1-9): ").strip())
        pt.append(choice1)
        if choice1>0 and choice1<=9:
            if board[choice1-1]==" ":
                board[choice1-1]=icon
            else:
                print()
                print("This space was taken...: (")
                print()
                player_move(icon)
        else:
            print("invalid choice... please enter again")
            player_move(icon)
    except ValueError:
        player_move(icon)
def cturn():
    print("Computer turn: ")
    time.sleep(0.5)
    print(n1)
    time.sleep(1)
def ai():
    global n1
    if board[n1-1]==" ":
        cturn()
    else:
        n1=random.choice(n)
        if n1 not in db:
            if n1 not in pt:

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        db.append(n1)
        cturn()
    else:
        if len(pt)!=9:
            ai ()
        else:
            pass
    else:
        if len(db)!=9:
            ai ()
def player_movec(i con):
    global n1
    def dup():
        global n1
        if(board[0]==i con and board[1]==i con) or (board[5]==i con and board[8]==i con)
or (board[4]==i con and board[6]==i con):
            n1=3
            ai ()
        elif(board[0]==i con and board[2]==i con) or (board[4]==i con and
board[7]==i con):
            n1=2
            ai ()
        elif(board[1]==i con and board[2]==i con) or (board[3]==i con and
board[6]==i con) or (board[4]==i con and board[8]==i con):
            n1=1
            ai ()
        elif(board[3]==i con and board[4]==i con) or (board[2]==i con and
board[8]==i con):
            n1=6
            ai ()
        elif(board[3]==i con and board[5]==i con) or (board[1]==i con and
board[7]==i con) or (board[0]==i con and board[8]==i con) or\
(board[2]==i con and board[6]==i con):
            n1=5
            ai ()
        elif(board[4]==i con and board[5]==i con) or (board[0]==i con and
board[6]==i con):
            n1=4
            ai ()
        elif(board[6]==i con and board[7]==i con) or (board[2]==i con and
board[5]==i con) or (board[0]==i con and board[4]==i con):
            n1=9
            ai ()
        elif(board[6]==i con and board[8]==i con) or (board[1]==i con and
board[4]==i con):
            n1=8
            ai ()
        elif(board[7]==i con and board[8]==i con) or (board[0]==i con and
board[3]==i con) or (board[2]==i con and board[4]==i con):
            n1=7
            ai ()

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    else:
        n1=random.choi ce(n)
        if n1 not in db:
            if n1 not in pt:
                db.append(n1)
                cturn()
            else:
                if len(pt)!=9:
                    dup()
                else:
                    pass
        else:
            if len(db)!=9:
                dup()
            else:
                pass
    dup()
    if board[n1-1]==" ":
        board[n1-1]=i con
    else:
        print()
        print("This space was taken...: ")
        print()
        pl ayer_movec(i con)
def is_vi ctory(i con):
    if(board[0]==i con and board[1]==i con and board[2]==i con)or\
        (board[3]==i con and board[4]==i con and board[5]==i con)or\
        (board[6]==i con and board[7]==i con and board[8]==i con)or\
        (board[0]==i con and board[3]==i con and board[6]==i con)or\
        (board[1]==i con and board[4]==i con and board[7]==i con)or\
        (board[2]==i con and board[5]==i con and board[8]==i con)or\
        (board[0]==i con and board[4]==i con and board[8]==i con)or\
        (board[2]==i con and board[4]==i con and board[6]==i con):
        return True
    else:
        return Fal se
def is_draw():
    if " " not in board:
        return True
    else:
        return Fal se
def game():
    ch=int(input("whi ch mode you want to play\n1. computer vs player\n2. player vs
    pl ayer\nchoi ce: "))
    if ch==2:
        while True:
            print_board()
            pl ayer_move("X")
            print_board()
            if is_vi ctory("X"):
                print("X wins.. :) Congratul ations")

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        sys.exit()
    elif is_draw():
        print("It's a draw!")
        sys.exit()
    player_move("0")
    if is_victory("0"):
        print_board()
        print("0 wins.. :) Congratulations")
        sys.exit()
    elif is_draw():
        print("It's a draw!")
        sys.exit()
elif ch==1:
    while True:
        print_board()
        player_move("X")
        print_board()
        if is_victory("X"):
            print("Player(X) wins.. :) Congratulations")
            sys.exit()
        elif is_draw():
            print("It's a draw!")
            sys.exit()
        player_movec("0")
        if is_victory("0"):
            print_board()
            print("Computer(0) wins.. :) Congratulations")
            sys.exit()
        elif is_draw():
            print("It's a draw!")
            sys.exit()

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game()