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#Initialize board

board = []

for i in range(64):
    board.append(0)

class Pawn:
    def __init__(self, colour, moves, moveCount) -> None:
        self.colour = colour
        self.moves = moves
        self.moveCount = moveCount

    def __repr__(self) -> str:
        if self.colour == 0:
            return "P"
        else:
            return "p"

    def setPos(self, position):
        self.position = position

    def addMove(self, move):
        self.moves.append(move)

    def isMoveLegal(self, destination):
        if self.colour == 0:
            if board[destination] == 0:
                if (destination - self.position)/8 == 1:
                    return True
                elif (destination - self.position)/8 == 2 and
self.moveCount == 0:
                    return True
                elif board[destination].colour == 1:
                    if (destination - self.position) == 7:
                        return True
                    elif (destination - self.position) == 9:
                        return True
            elif self.colour == 1:
                if board[destination] == 0:
                    if (destination - self.position)/8 == -1:
                        return True
                    elif (destination - self.position)/8 == -2 and
self.moveCount == 0:
                        return True
                elif board[destination].colour == 0:
                    if (destination - self.position) == -7:

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        return True
    elif (destination - self.position) == -9:
        return True

#def canMove():

class Knight:
    def __init__(self, colour, moves, moveCount) -> None:
        self.colour = colour
        self.moves = moves
        self.moveCount = moveCount

    def __repr__(self) -> str:
        if self.colour == 0:
            return "N"
        else:
            return "n"

    def setPos(self, position):
        self.position = position

    def addMove(self, move):
        self.moves.append(move)

    def isMoveLegal(self, destination):
        if self.colour == 0:
            if board[destination] == 0 or board[destination].colour == 1:
                if (destination - self.position)/15 == 1 or (destination -
self.position)/15 == -1:
                    return True
                elif (destination - self.position)/17 == 1 or (destination
- self.position)/17 == -1:
                    return True
                elif (destination - self.position)/10 == 1 or (destination
- self.position)/10 == -1:
                    return True
                elif (destination - self.position)/6 == 1 or (destination
- self.position)/6 == -1:
                    return True
            elif self.colour == 1:
                if board[destination] == 0 or board[destination].colour == 0:
                    if (destination - self.position)/15 == 1 or (destination -
self.position)/15 == -1:
                        return True
                    elif (destination - self.position)/17 == 1 or (destination
- self.position)/17 == -1:
                        return True

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        elif (destination - self.position)/10 == 1 or (destination
- self.position)/10 == -1:
            return True
        elif (destination - self.position)/6 == 1 or (destination
- self.position)/6 == -1:
            return True

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#def canMove():

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class Bishop:

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    def __init__(self, colour, moves, moveCount) -> None:
        self.colour = colour
        self.moves = moves
        self.moveCount = moveCount

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    def __repr__(self) -> str:
        if self.colour == 0:
            return "B"
        else:
            return "b"

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    def setPos(self, position):
        self.position = position

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    def addMove(self, move):
        self.moves.append(move)

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    def isMoveLegal(self, destination):
        if self.colour == 0:
            if board[destination] == 0 or board[destination].colour == 1:
                if (destination - self.position)%7 == 0:
                    return True
                elif (destination - self.position)%9 == 0:
                    return True
        elif self.colour == 1:
            if board[destination] == 0 or board[destination].colour == 0:
                if (destination - self.position)%7 == 0:
                    return True
                elif (destination - self.position)%9 == 0:
                    return True

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#def canMove():

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class Rook:

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    def __init__(self, colour, moves, moveCount) -> None:
        self.colour = colour
        self.moves = moves

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        self.moveCount = moveCount

def __repr__(self) -> str:
    if self.colour == 0:
        return "R"
    else:
        return "r"

def setPos(self, position):
    self.position = position

def addMove(self, move):
    self.moves.append(move)

def isMoveLegal(self, destination):
    if self.colour == 0:
        if board[destination] == 0 or board[destination].colour == 1:
            if ((self.position)//8)*8 <= destination <=
(((self.position)//8)*8) + 7):
                return True
            elif (destination - self.position)%8 == 0:
                return True
        elif self.colour == 1:
            if board[destination] == 0 or board[destination].colour == 0:
                if ((self.position)//8)*8 <= destination <=
(((self.position)//8)*8) + 7):
                    return True
                elif (destination - self.position)%8 == 0:
                    return True

#def canMove():

class Queen:
    def __init__(self, colour, moves, moveCount) -> None:
        self.colour = colour
        self.moves = moves
        self.moveCount = moveCount

    def __repr__(self) -> str:
        if self.colour == 0:
            return "Q"
        else:
            return "q"

    def setPos(self, position):
        self.position = position

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def addMove(self, move):
    self.moves.append(move)

def isMoveLegal(self, destination):
    if self.colour == 0:
        if board[destination] == 0 or board[destination].colour == 1:
            if ((self.position)//8)*8 <= destination <=
(((self.position)//8)*8) + 7):
                return True
            elif (destination - self.position)%8 == 0:
                return True
            elif (destination - self.position)%7 == 0:
                return True
            elif (destination - self.position)%9 == 0:
                return True

        elif self.colour == 1:
            if board[destination] == 0 or board[destination].colour == 0:
                if ((self.position)//8)*8 <= destination <=
(((self.position)//8)*8) + 7):
                    return True
                elif (destination - self.position)%8 == 0:
                    return True
                elif (destination - self.position)%7 == 0:
                    return True
                elif (destination - self.position)%9 == 0:
                    return True

#def canMove():

class King:
    def __init__(self, colour, moves, moveCount) -> None:
        self.colour = colour
        self.moves = moves
        self.moveCount = moveCount

    def __repr__(self) -> str:
        if self.colour == 0:
            return "K"
        else:
            return "k"

    def setPos(self, position):
        self.position = position

    def isMoveLegal(self, destination):

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if self.colour == 0:
    if board[destination] == 0 or board[destination].colour == 1:
        if (destination - self.position)/8 == 1:
            return True
        if (destination - self.position)/8 == -1:
            return True
        if (destination - self.position)/7 == 1:
            return True
        if (destination - self.position)/7 == -1:
            return True
        if (destination - self.position)/9 == 1:
            return True
        if (destination - self.position)/9 == -1:
            return True
        if (destination - self.position) == 1:
            return True
        if (destination - self.position) == -1:
            return True

elif self.colour == 1:
    if board[destination] == 0 or board[destination].colour == 1:
        if (destination - self.position)/8 == 1:
            return True
        if (destination - self.position)/8 == -1:
            return True
        if (destination - self.position)/7 == 1:
            return True
        if (destination - self.position)/7 == -1:
            return True
        if (destination - self.position)/9 == 1:
            return True
        if (destination - self.position)/9 == -1:
            return True
        if (destination - self.position) == 1:
            return True
        if (destination - self.position) == -1:
            return True

#def canMove():

Wpawn1 = Pawn(0, [], 0)
Wpawn2 = Pawn(0, [], 0)
Wpawn3 = Pawn(0, [], 0)
Wpawn4 = Pawn(0, [], 0)
Wpawn5 = Pawn(0, [], 0)
Wpawn6 = Pawn(0, [], 0)
Wpawn7 = Pawn(0, [], 0)

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Wpawn8 = Pawn(0, [], 0)
Wknight1 = Knight(0, [], 0)
Wknight2 = Knight(0, [], 0)
Wbishop1 = Bishop(0, [], 0)
Wbishop2 = Bishop(0, [], 0)
Wrook1 = Rook(0, [], 0)
Wrook2 = Rook(0, [], 0)
Wqueen = Queen(0, [], 0)
Wking = King(0, [], 0)
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Bpawn1 = Pawn(1, [], 0)
Bpawn2 = Pawn(1, [], 0)
Bpawn3 = Pawn(1, [], 0)
Bpawn4 = Pawn(1, [], 0)
Bpawn5 = Pawn(1, [], 0)
Bpawn6 = Pawn(1, [], 0)
Bpawn7 = Pawn(1, [], 0)
Bpawn8 = Pawn(1, [], 0)
Bknight1 = Knight(1, [], 0)
Bknight2 = Knight(1, [], 0)
Bbishop1 = Bishop(1, [], 0)
Bbishop2 = Bishop(1, [], 0)
Brook1 = Rook(1, [], 0)
Brook2 = Rook(1, [], 0)
Bqueen = Queen(1, [], 0)
Bking = King(1, [], 0)
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```
def startingPos():
    board[8] = Wpawn1
    board[9] = Wpawn2
    board[10] = Wpawn3
    board[11] = Wpawn4
    board[12] = Wpawn5
    board[13] = Wpawn6
    board[14] = Wpawn7
    board[15] = Wpawn8
    board[0] = Wrook1
    board[1] = Wknight1
    board[2] = Wbishop1
    board[3] = Wqueen
    board[4] = Wking
    board[5] = Wknight2
    board[6] = Wbishop2
    board[7] = Wrook2

    board[48] = Bpawn1
    board[49] = Bpawn2
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board[50] = Bpawn3
board[51] = Bpawn4
board[52] = Bpawn5
board[53] = Bpawn6
board[54] = Bpawn7
board[55] = Bpawn8
board[56] = Brook1
board[57] = Bknight1
board[58] = Bbishop1
board[59] = Bqueen
board[60] = Bking
board[61] = Bknight2
board[62] = Bbishop2
board[63] = Brook2
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Wpawn1.setPos(8)
Wpawn2.setPos(9)
Wpawn3.setPos(10)
Wpawn4.setPos(11)
Wpawn5.setPos(12)
Wpawn6.setPos(13)
Wpawn7.setPos(14)
Wpawn8.setPos(15)
Wrook1.setPos(0)
Wknight1.setPos(1)
Wbishop1.setPos(2)
Wqueen.setPos(3)
Wking.setPos(4)
Wbishop2.setPos(5)
Wknight2.setPos(6)
Wrook2.setPos(7)
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Bpawn1.setPos(48)
Bpawn2.setPos(49)
Bpawn3.setPos(50)
Bpawn4.setPos(51)
Bpawn5.setPos(52)
Bpawn6.setPos(53)
Bpawn7.setPos(54)
Bpawn8.setPos(55)
Brook1.setPos(56)
Bknight1.setPos(57)
Bbishop1.setPos(58)
Bqueen.setPos(59)
Bking.setPos(60)
Bbishop2.setPos(61)
Bknight2.setPos(62)
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    Brook2.setPos(63)

WattackList = []
BattackList = []

def makeWattackList(attack):
    attack.append()

def move(piece, dest):
    if piece.isMoveLegal(dest):
        if board[dest] != 0 and board[dest].colour != piece.colour:
            board[dest].position = -983
            board[piece.position] = 0
            board[dest] = piece
            piece.position = dest
            piece.addMove(dest)
            piece.moveCount+=1

#Testing
startingPos()
move(Wpawn5, 28)
move(Bpawn4, 35)
move(Wpawn5, 35)
move(Bpawn4, 27)
print(board, Wpawn5.position, Bpawn4.position)

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