Final Project:

**Source code:**

# Memory Card Game

import random

def initialize\_board():

symbols = ["A", "B", "C", "D", "E", "F", "G", "H"]

cards = symbols \* 2

random.shuffle(cards)

return [[None] \* 4 for \_ in range(2)]

def print\_board(board):

for row in board:

print(" ".join(str(card) if card is not None else " " for card in row))

def memory\_card\_game():

board = initialize\_board()

matched\_pairs = set()

while len(matched\_pairs) < 8:

print\_board(board)

try:

first\_row, first\_col = map(int, input("Enter the first card's row and column: ").split())

second\_row, second\_col = map(int, input("Enter the second card's row and column: ").split())

except ValueError:

print("Invalid input. Try again.")

continue

if (

0 <= first\_row < 2 and 0 <= first\_col < 4 and

0 <= second\_row < 2 and 0 <= second\_col < 4 and

(first\_row, first\_col) != (second\_row, second\_col) and

(first\_row, first\_col) not in matched\_pairs and

(second\_row, second\_col) not in matched\_pairs

):

if board[first\_row][first\_col] == board[second\_row][second\_col]:

print("Match!")

matched\_pairs.add((first\_row, first\_col))

matched\_pairs.add((second\_row, second\_col))

else:

print("No match. Try again.")

board[first\_row][first\_col] = board[second\_row][second\_col] = None

else:

print("Invalid input. Try again.")

# Run the Memory Card Game

memory\_card\_game()

output:

