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import turtle #from pltw
import random
import time
# set up
screen = turtle.Screen()
screen.title("Matching Game")
screen.bgcolor("white")
screen.setup(width=800, height=600)
# colors and shapes
shape_colors = ["paleturquoise", "salmon", "lightgreen", "thistle",
"navajowhite"] * 2
turtle_shapes = ["circle", "square", "arrow", "classic", "triangle"] * 2

pairs = list(zip(shape_colors, turtle_shapes))
random.shuffle(pairs)
shape_colors, turtle_shapes = zip(*pairs)
shape_colors = list(shape_colors)
turtle_shapes = list(turtle_shapes)
state = [False] * 10
flipped_cards = []
score = 0
start_time = time.time()
# positions of the cards
positions = [(-300 + i * 150, 100) for i in range(5)] + [(-300 + i * 150,
-100) for i in range(5)]
# how the cards look on the screen
cards = []
for pos in positions:
    card = turtle.Turtle()
    card.shape("square")
    card.color("lightpink")
    card.penup()
    card.goto(pos)
    card.shapesize(stretch_wid=6, stretch_len=5)
    cards.append(card)
# score display
score_display = turtle.Turtle()
score_display.hideturtle()
score_display.color("black")
score_display.penup()

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score_display.goto(0, 250)
score_display.write(f"Score: {score}", align="center", font=("calibri",
22, "bold"))
# Key press functions to flip cards over
def flip_card_1():
    flip_card(0)
def flip_card_2():
    flip_card(1)
def flip_card_3():
    flip_card(2)
def flip_card_4():
    flip_card(3)
def flip_card_5():
    flip_card(4)
def flip_card_6():
    flip_card(5)
def flip_card_7():
    flip_card(6)
def flip_card_8():
    flip_card(7)
def flip_card_9():
    flip_card(8)
def flip_card_10():
    flip_card(9)

def flip_card(index):
    global score
    if state[index]:
        return

    cards[index].color(shape_colors[index])
    cards[index].shape(turtle_shapes[index])
    state[index] = True
    flipped_cards.append(index)

    if len(flipped_cards) == 2:
        card1, card2 = flipped_cards
        if shape_colors[card1] == shape_colors[card2] and
turtle_shapes[card1] == turtle_shapes[card2]:
            score += 2
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        score_display.clear()
        score_display.write(f"Score: {score}", align="center",
font=("calibri", 22, "bold"))
    else:
        screen.update()
        time.sleep(0.5)
        cards[card1].color("lightpink")
        cards[card1].shape("square")
        cards[card2].color("lightpink")
        cards[card2].shape("square")
        state[card1] = False
        state[card2] = False
    flipped_cards.clear()

    if all(state):
        score_display.goto(0, 0)
        score_display.write("Game Over! Congratulations!", align="center",
font=("arial", 24, "bold"))
# events
screen.listen()
screen.onkey(flip_card_1, "1")
screen.onkey(flip_card_2, "2")
screen.onkey(flip_card_3, "3")
screen.onkey(flip_card_4, "4")
screen.onkey(flip_card_5, "5")
screen.onkey(flip_card_6, "6")
screen.onkey(flip_card_7, "7")
screen.onkey(flip_card_8, "8")
screen.onkey(flip_card_9, "9")
screen.onkey(flip_card_10, "0")
screen.mainloop()
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