import random

import re

class Customer:

def \_\_init\_\_(self, customer\_id, name, phone):

self.customer\_id = customer\_id

self.name = name

self.phone = phone

def generate\_customer\_id():

random\_id = random.randint(1000, 9999)

return f"TICK{random\_id}"

def verify\_customer\_id(customer\_id):

pattern = r"^TICK\d{4}$"

return re.match(pattern, customer\_id) is not None

class TicketBooking:

def \_\_init\_\_(self):

self.events = {

"Concert": {"price": 50, "seats": 100},

"Theater": {"price": 40, "seats": 75},

"Sports": {"price": 60, "seats": 50},

}

self.booked\_tickets = []

def display\_events(self):

print("\nAvailable Events:")

for event, details in self.events.items():

print(f"{event}: ${details['price']} per ticket, {details['seats']} seats available")

def book\_ticket(self, event\_name, quantity, customer):

if event\_name in self.events:

event = self.events[event\_name]

if event['seats'] >= quantity:

total\_price = event['price'] \* quantity

event['seats'] -= quantity

self.booked\_tickets.append({

"customer\_id": customer.customer\_id,

"event": event\_name,

"quantity": quantity,

"total\_price": total\_price,

})

print(f"Successfully booked {quantity} tickets for {event\_name}. Total price: ${total\_price}")

else:

print(f"Not enough seats available for {event\_name}. Only {event['seats']} seats left.")

else:

print(f"Event {event\_name} not found.")

def view\_booked\_tickets(self, customer):

print("\nYour Booked Tickets:")

customer\_tickets = [t for t in self.booked\_tickets if t["customer\_id"] == customer.customer\_id]

if not customer\_tickets:

print("No tickets booked.")

else:

for ticket in customer\_tickets:

print(f"Event: {ticket['event']}, Quantity: {ticket['quantity']}, Total Price: ${ticket['total\_price']}")

if \_\_name\_\_ == "\_\_main\_\_":

booking\_system = TicketBooking()

print("Welcome to the Ticket Booking System!")

customer\_id = input("Enter your Customer ID: ")

if Customer.verify\_customer\_id(customer\_id):

name = input("Enter your name: ")

phone = input("Enter your phone number: ")

customer = Customer(customer\_id, name, phone)

print("Customer ID verified. Proceeding to ticket booking...")

else:

print("Invalid Customer ID. Please register.")

name = input("Enter your name: ")

phone = input("Enter your phone number: ")

customer\_id = Customer.generate\_customer\_id()

customer = Customer(customer\_id, name, phone)

print(f"Your Customer ID is: {customer\_id}")

while True:

print("\nTicket Booking Menu:")

print("1. View Events")

print("2. Book Ticket")

print("3. View My Tickets")

print("4. Exit")

choice = input("Enter your choice: ")

if choice == "1":

booking\_system.display\_events()

elif choice == "2":

event\_name = input("Enter the event name: ")

quantity = int(input("Enter the number of tickets: "))

booking\_system.book\_ticket(event\_name, quantity, customer)

elif choice == "3":

booking\_system.view\_booked\_tickets(customer)

elif choice == "4":

print("Thank you for using the Ticket Booking System! Have a great day!")

break

else:

print("Invalid choice. Please try again.")