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def airline_cargo_expert_system():
    print("Airline & Cargo Expert System: Welcome! How can I assist you with scheduling today?")

    while True:
        user_input = input("You: ").strip().lower()

        if user_input == "hi" or user_input == "hello":
            print("Airline & Cargo Expert System: Hello! How can I help you with your scheduling needs?")
        elif user_input == "thanks" or user_input == "thank you":
            print("Airline & Cargo Expert System: You're welcome! Fly safe and have a great day!")
        elif user_input == "sorry":
            print("Airline & Cargo Expert System: No problem at all!")
        elif "no" in user_input or "don't" in user_input or "not interested" in user_input:
            print("Airline & Cargo Expert System: I understand. Let me know if you need any assistance later!")
        elif user_input == "bye" or user_input == "exit":
            print("Airline & Cargo Expert System: Thank you for using our services. Safe travels!")
            break

        elif ("book" in user_input or "ticket" in user_input or "flight" in user_input) and not ("cargo" in user_input or "freight" in user_input):
            departure = input("Airline & Cargo Expert System: Please enter your departure city: ").strip().lower()
            destination = input("Airline & Cargo Expert System: Please enter your destination city: ").strip().lower()

            route_options = {
                "new york-london": ["Delta Airlines: 7:30 AM, 6:00 PM", "British Airways: 9:00 AM, 11:00 PM"],
                "new york-paris": ["Air France: 10:15 AM", "American Airlines: 8:45 PM"],
                "chicago-tokyo": ["United Airlines: 1:20 PM", "JAL: 11:45 AM"],
                "los angeles-sydney": ["Qantas: 10:30 PM", "United Airlines: 11:15 PM"],
                "london-dubai": ["Emirates: 8:20 AM, 3:15 PM", "British Airways: 10:30 AM"]
            }

            route_key = f"{departure}-{destination}"
            alt_route_key = f"{destination}-{departure}"

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if route_key in route_options:
    print(f"Airline & Cargo Expert System: Available flights from {departure.title()} to {destination.title()}:")
    for flight in route_options[route_key]:
        print(f"- {flight}")
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class_choice = input("Airline & Cargo Expert System: What class would you prefer? (Economy/Business/First): ").strip().lower()
passengers = input("Airline & Cargo Expert System: How many passengers will be traveling?: ").strip()
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print(f"Airline & Cargo Expert System: Thank you! I've noted your preference for {class_choice.title()} class for {passengers} passenger(s).")
print("Airline & Cargo Expert System: Please contact our booking department at 1-800-FLY-BOOK to complete your reservation.")
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elif alt_route_key in route_options:
    print(f"Airline & Cargo Expert System: I found return flights from {destination.title()} to {departure.title()}. Would you like to see these instead?")
else:
    print(f"Airline & Cargo Expert System: I'm sorry, we don't have direct flights between {departure.title()} and {destination.title()} in our database.")
    print("Airline & Cargo Expert System: Please contact our customer service at 1-800-FLY-HELP for assistance with custom routes.")
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elif "cargo" in user_input or "freight" in user_input or "shipment" in user_input:
    origin = input("Airline & Cargo Expert System: Please enter the origin city for your cargo: ").strip().lower()
    destination = input("Airline & Cargo Expert System: Please enter the destination city: ").strip().lower()
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cargo_type = input("Airline & Cargo Expert System: What type of cargo are you shipping? (General/Perishable/Hazardous/Oversized): ").strip().lower()
cargo_weight = input("Airline & Cargo Expert System: Approximate weight of cargo (in kg): ").strip()
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try:
    weight = float(cargo_weight)
    cargo_options = {
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        "perishable": ["Refrigerated containers required", "Priority shipping available",
"Temperature monitoring service"],
        "hazardous": ["Special handling required", "Safety documentation necessary",
"Restricted flight options"],
        "oversized": ["Special loading equipment needed", "Limited flight availability",
"Advance booking required"],
        "general": ["Standard shipping options available", "Regular flight schedules
apply"]
    }

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    if cargo_type in cargo_options:
        print(f"Airline & Cargo Expert System: Important notes for {cargo_type} cargo:")
        for note in cargo_options[cargo_type]:
            print(f"- {note}")

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    # Calculate estimated price based on weight and cargo type
    base_rate = 5.0 # Base rate per kg in USD
    multipliers = {"general": 1.0, "perishable": 1.5, "hazardous": 2.0, "oversized": 1.8}

    estimated_cost = weight * base_rate * multipliers.get(cargo_type, 1.0)
    print(f"Airline & Cargo Expert System: Estimated shipping cost:
${estimated_cost:.2f}")
    print("Airline & Cargo Expert System: For final quotes and booking, please
contact our cargo department at 1-800-AIR-CARGO.")

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    except ValueError:
        print("Airline & Cargo Expert System: Invalid weight input. Please enter a
numeric value.")

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    elif "delay" in user_input or "cancel" in user_input or "postpone" in user_input:
        flight_number = input("Airline & Cargo Expert System: Please enter your flight
number: ").strip().upper()

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    if flight_number:
        # This would typically check a database - we're simulating responses
        if "delay" in user_input:
            print(f"Airline & Cargo Expert System: Flight {flight_number} status check:")
            import random
            delay_time = random.choice([0, 30, 45, 60, 120])

            if delay_time == 0:

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        print(f"Flight {flight_number} is currently on schedule.")
    else:
        print(f"Flight {flight_number} is currently delayed by {delay_time} minutes.")
        print("Compensation may be available for delays over 3 hours. Please check
with customer service.")
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    elif "cancel" in user_input:
        print(f"Airline & Cargo Expert System: For cancellation of flight
{flight_number}:")
        print("- Economy tickets: 70% refund if cancelled 24+ hours before departure")
        print("- Business/First class: 85% refund if cancelled 24+ hours before
departure")
        print("- All classes: 50% refund if cancelled less than 24 hours before
departure")
        print("Please contact our customer service at 1-800-FLY-HELP to process your
cancellation.")
    else:
        print("Airline & Cargo Expert System: Please provide a valid flight number to
check status or make changes.")
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    elif "schedule" in user_input or "reschedule" in user_input:
        print("Airline & Cargo Expert System: For scheduling or rescheduling, we need
some information:")
        current_booking = input("Do you have an existing booking? (yes/no):
").strip().lower()
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        if current_booking == "yes":
            booking_ref = input("Please enter your booking reference: ").strip().upper()
            print(f"Airline & Cargo Expert System: Retrieving booking {booking_ref}...")
            print("Airline & Cargo Expert System: For security reasons, please contact our
scheduling department at 1-800-FLY-SCHED with your booking reference to make
changes.")
        else:
            print("Airline & Cargo Expert System: To create a new schedule, please use our
booking service.")
            print("Would you like me to help you with flight booking or cargo shipping?")
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    elif "baggage" in user_input or "luggage" in user_input:
        flight_class = input("Airline & Cargo Expert System: What is your ticket class?
(Economy/Business/First): ").strip().lower()
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    baggage_allowance = {
        "economy": ["1 checked bag (23kg max)", "1 carry-on (7kg max)", "1 personal
item"],
        "business": ["2 checked bags (32kg max each)", "1 carry-on (10kg max)", "1
personal item"],
        "first": ["3 checked bags (32kg max each)", "1 carry-on (10kg max)", "1 personal
item"]
    }

    if flight_class in baggage_allowance:
        print(f"Airline & Cargo Expert System: Baggage allowance for {flight_class.title()}
class:")
        for item in baggage_allowance[flight_class]:
            print(f"- {item}")

        excess = input("Do you need information about excess baggage charges?
(yes/no): ").strip().lower()
        if excess == "yes":
            print("Airline & Cargo Expert System: Excess baggage is charged at $25 per kg
over the allowance.")
            print("Pre-booking excess baggage online saves 20% on these charges.")
        else:
            print("Airline & Cargo Expert System: Please specify a valid ticket class
(Economy/Business/First).")

    elif "track" in user_input or "status" in user_input:
        tracking_type = input("Airline & Cargo Expert System: Would you like to track a
passenger flight or cargo shipment? ").strip().lower()

        if "passenger" in tracking_type or "flight" in tracking_type:
            flight_number = input("Airline & Cargo Expert System: Please enter the flight
number: ").strip().upper()
            print(f"Airline & Cargo Expert System: Flight {flight_number} is currently in
transit.")
            print("For real-time updates, please visit our website or use our mobile app.")

        elif "cargo" in tracking_type or "shipment" in tracking_type:
            tracking_id = input("Airline & Cargo Expert System: Please enter your tracking ID:
").strip().upper()
            print(f"Airline & Cargo Expert System: Tracking shipment {tracking_id}...")
            print("Your shipment is currently being processed at our sorting facility.")

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    print("Estimated delivery is within the next 48 hours.")
    print("For detailed tracking, please visit our cargo tracking portal online.")

else:
    print("Airline & Cargo Expert System: I'm not sure what you'd like to track. Please
specify 'passenger flight' or 'cargo shipment'.")

else:
    print("Airline & Cargo Expert System: I'm not sure I understand your request. For
immediate assistance, please call:")
    print("- Passenger flights: 1-800-FLY-HELP")
    print("- Cargo shipping: 1-800-AIR-CARGO")

# Run the expert system
airline_cargo_expert_system()
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