Project Title: EV Charging Station Finder and Slot Booking System

Project Description:

The EV Charging Station Finder and Slot Booking System is a Python-based console application designed to help electric vehicle (EV) owners locate charging stations and book charging slots in advance. The application allows users to filter stations by location and fast-charging capability, view available time slots, and manage their appointments effectively.

Key Features:

1. Find Charging Stations:
   - Users can search for EV charging stations based on location.
   - The option to filter stations by fast-charging capability is available.
   - The system displays relevant details of the stations, including ID, name, location, fast-charging availability, and the number of available slots.

2. Book a Slot:
   - Users can book a time slot at a specific charging station.
   - The system displays all available time slots for the selected station on a given date.
   - Once a slot is booked, the system updates the availability status and reduces the number of available slots.

3. Update Appointment:
   - Users can view their current appointments and update the status of any appointment from "to-do" to "done."
   - Once an appointment is marked as "done," the system frees up the time slot, making it available for future bookings.

4. Exit the System:
   - Users can exit the application at any time, ensuring that their data is saved and managed during the session.

Data Structures:

- Charging Stations: A list of dictionaries that holds information about various charging stations, such as ID, name, location, fast-charging capability, available slots, and time slot availability.
- Appointments: A list of dictionaries that records user appointments, including user name, station ID, station name, booking date, time, and status.

Workflow:

1. Station Search and Filtering:
   - Users can search for stations based on location and fast-charging needs.
   - The application filters and displays stations that match the user's criteria.

2. Slot Booking:

- After selecting a station, users can choose a time slot and book it by entering their name and desired date.
- The system updates the time slot's status and stores the appointment in the system.

3. Appointment Management:
- Users can update their existing appointments, marking them as completed.
- The system reflects these changes, allowing other users to book the newly available slots.

Usage:
This project is useful for electric vehicle owners who need to find and book charging stations efficiently. It provides a simple and user-friendly interface for managing EV charging needs, ensuring that users can plan their charging sessions ahead of time without any hassle.

Screen Shots:

```
PS C:\Users\Maggi\Desktop\Hackathins\aug-22> python aug22.py

EV Charging Station Finder and Slot Booking
1. Find Charging Stations
2. Book a Slot
3. Update Appointment
4. Exit
Choose an option: 1
Enter location (or leave blank to skip):
Require fast charging? (yes/no): no
Available Charging Stations:
ID: 2, Name: EcoCharge, Location: Uptown, Fast Charging: No, Available Slots: 3
ID: 4, Name: Solar Power Station, Location: Midtown, Fast Charging: No, Available Slots: 4

EV Charging Station Finder and Slot Booking
1. Find Charging Stations
2. Book a Slot
3. Update Appointment
4. Exit
Choose an option:
```

```
EV Charging Station Finder and Slot Booking
1. Find Charging Stations
2. Book a Slot
3. Update Appointment
4. Exit
Choose an option: 2
Enter the ID of the station to book a slot: 4
Enter your name: Meghana
Enter booking date (YYYY-MM-DD): 2024-12-05

Available Time Slots for Solar Power Station:
09:00 AM
10:00 AM
11:00 AM
Enter the time slot you want to book (e.g., 09:00 AM): 11:00 AM
Slot booked successfully at Solar Power Station on 2024-12-05 at 11:00 AM

EV Charging Station Finder and Slot Booking
1. Find Charging Stations
2. Book a Slot
3. Update Appointment
4. Exit
Choose an option: 2
Enter the ID of the station to book a slot: 4
Enter your name: rj
Enter booking date (YYYY-MM-DD): 2024-12-05

Available Time Slots for Solar Power Station:
09:00 AM
10:00 AM
Enter the time slot you want to book (e.g., 09:00 AM):
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