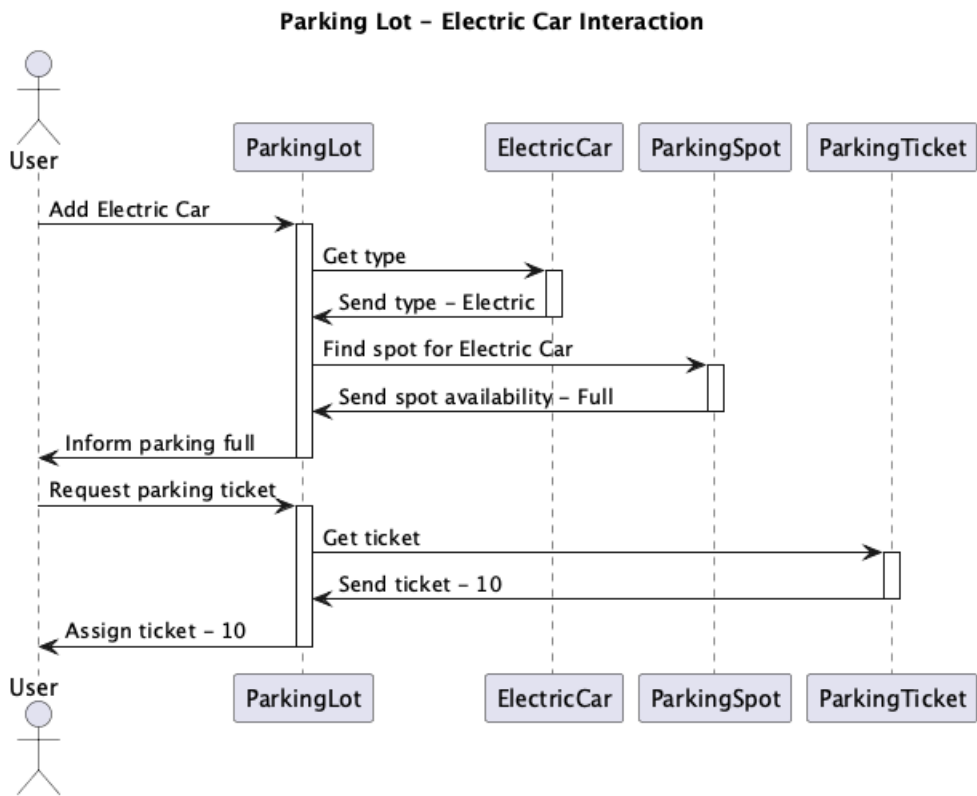# PlantUML Sequence Diagram

Root Cause Analysis

The logs indicate that the parking lot is full and cannot accommodate the electric car. This is the root cause of the issue. The car attempts to park, but the `ParkingLot` module informs the user that there is no available space. The system then assigns a parking ticket (10) to the car, even though it cannot park. This could be due to a bug in the parking lot management system or a misconfiguration of the maximum parking capacity.

Recommendations

- Investigate the reason for the parking lot being full. Is it due to a temporary surge in demand or a general lack of available spots?
- If the parking lot is consistently full, consider expanding its capacity or implementing a reservation system.
- Review the logic for assigning parking tickets to ensure it aligns with the intended behavior. It may not be appropriate to issue a ticket if a car cannot park.
- Implement additional checks to prevent parking full errors in the future. This could involve monitoring parking availability in real-time and providing users with accurate information before they attempt to park.

Parking Lot – Electric Car Interaction

Logs:

```
2025-01-25 16:24:56,393 - root - INFO - class: ParkingLot, module:
src.parking.parkinglot, file: parkinglot.py, log: Creating new parking spot  , line:
70
2025-01-25 16:24:56,393 - root - INFO - class: ElectricCar, module:
src.vehicle.vehicle_types, file: vehicle_types.py, log: Car type is
VehicleType.ELECTRIC, line: 24
2025-01-25 16:24:56,393 - root - INFO - class: ParkingLot, module:
src.parking.parkinglot, file: parkinglot.py, log: Parking full  , line: 75
2025-01-25 16:24:56,393 - root - INFO - class: ElectricCar, module:
src.vehicle.vehicle_types, file: vehicle_types.py, log: Assigning ticket None, line:
12
2025-01-25 16:24:56,393 - root - INFO - class: ElectricCar, module:
src.vehicle.vehicle_types, file: vehicle_types.py, log: Car type is
VehicleType.ELECTRIC, line: 24
2025-01-25 16:24:56,393 - root - INFO - class: ParkingTicket, module:
src.parking.parkingticket, file: parkingticket.py, log: Getting parking ticket 10,
line: 11
2025-01-25 16:24:56,393 - root - INFO - class: ParkingLot, module:
src.parking.parkinglot, file: parkinglot.py, log: Finding spot  , line: 61
2025-01-25 16:24:56,393 - root - INFO - class: ParkingSpot, module:
src.parking.parkingspot, file: parkingspot.py, log: Parking spot  assigned., line: 21
```

This is an LLM generated report - please be aware of hallucinations
(Esp if you provide an incorrect prompt/insufficient data)