MyParking

MYPARKING

TEAM 2

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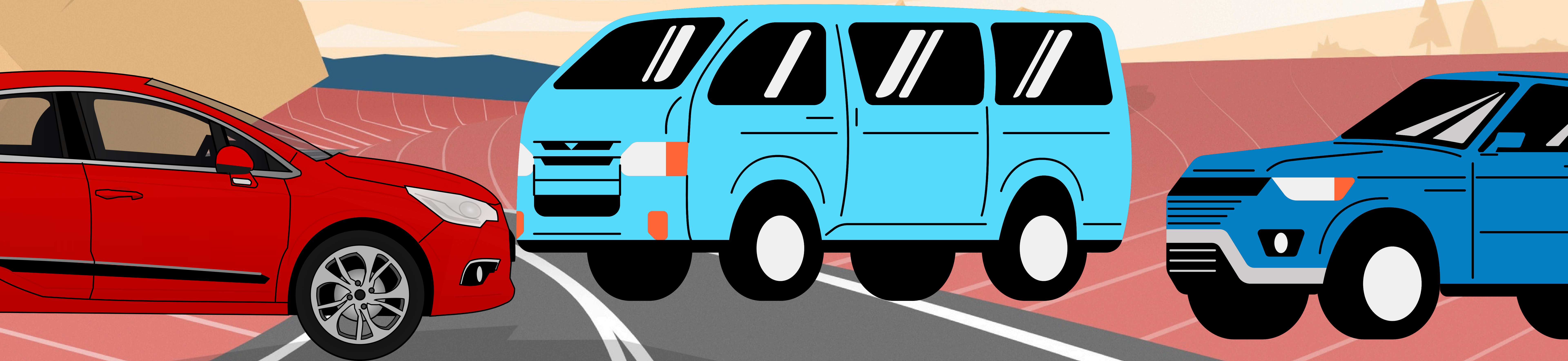
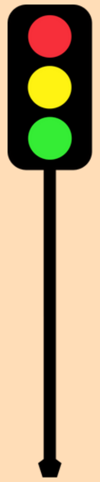


PRESENTATION CONTENTS



01 Project Idea

02 Key Features

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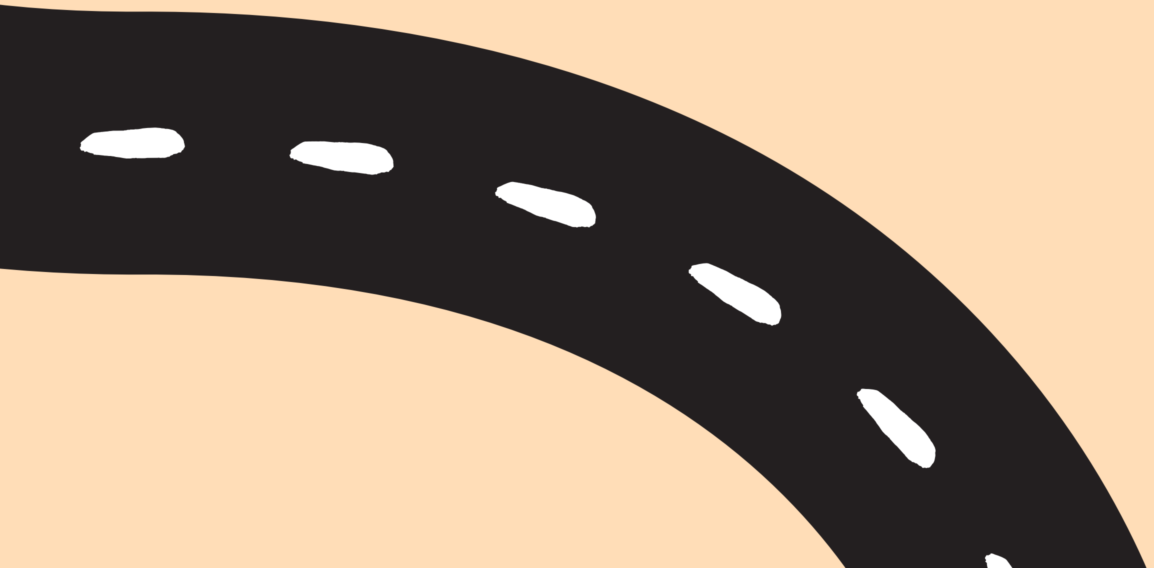
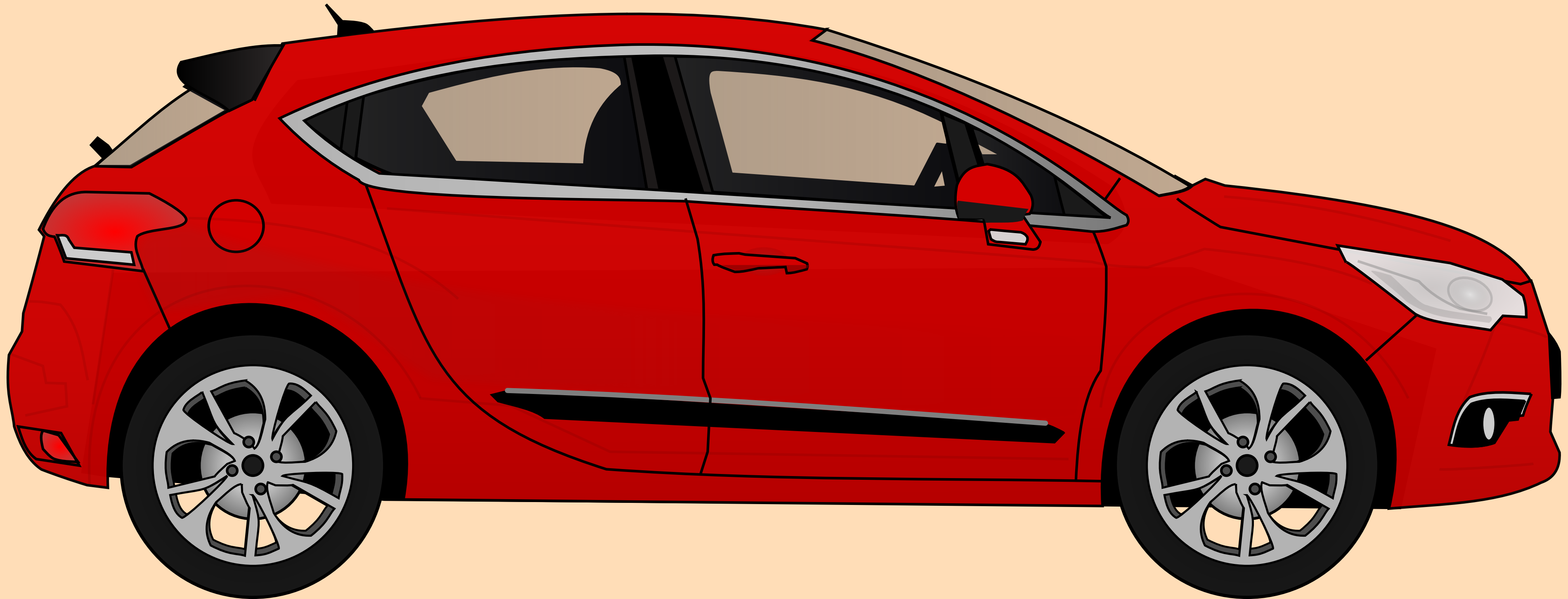
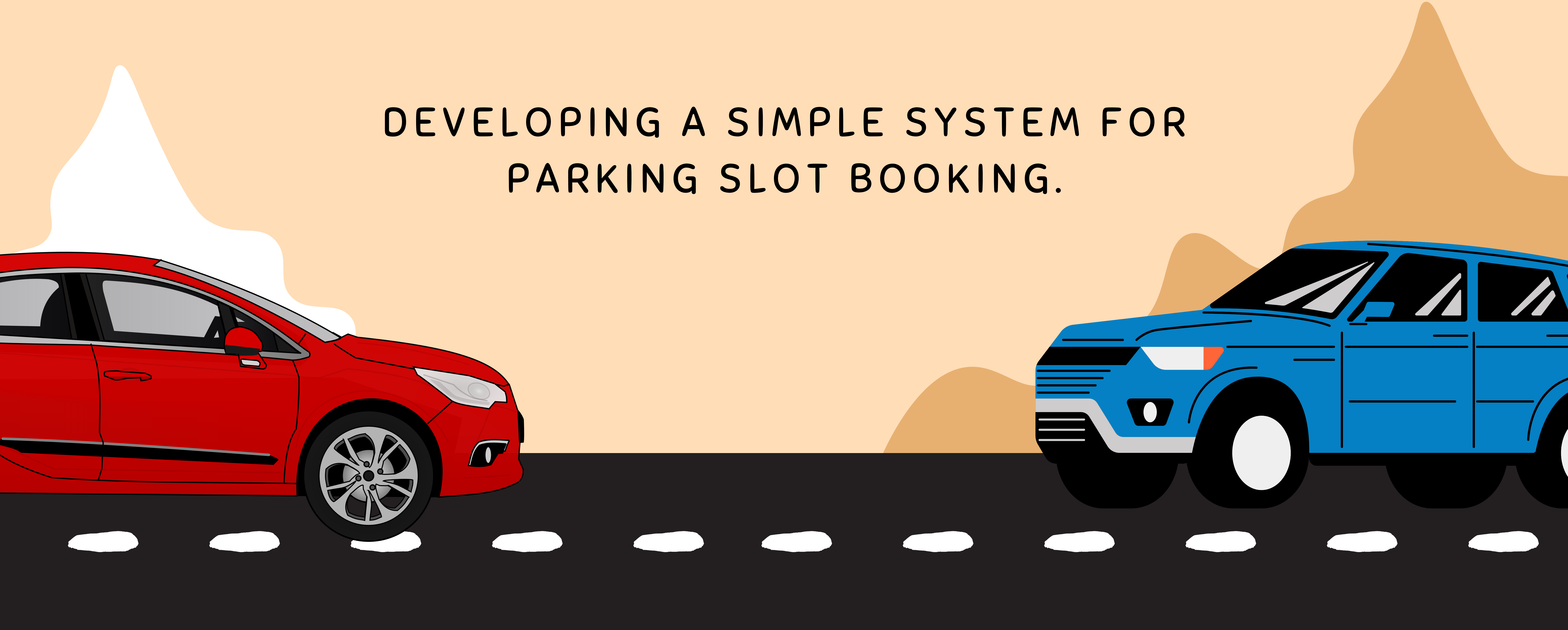
04 Overview

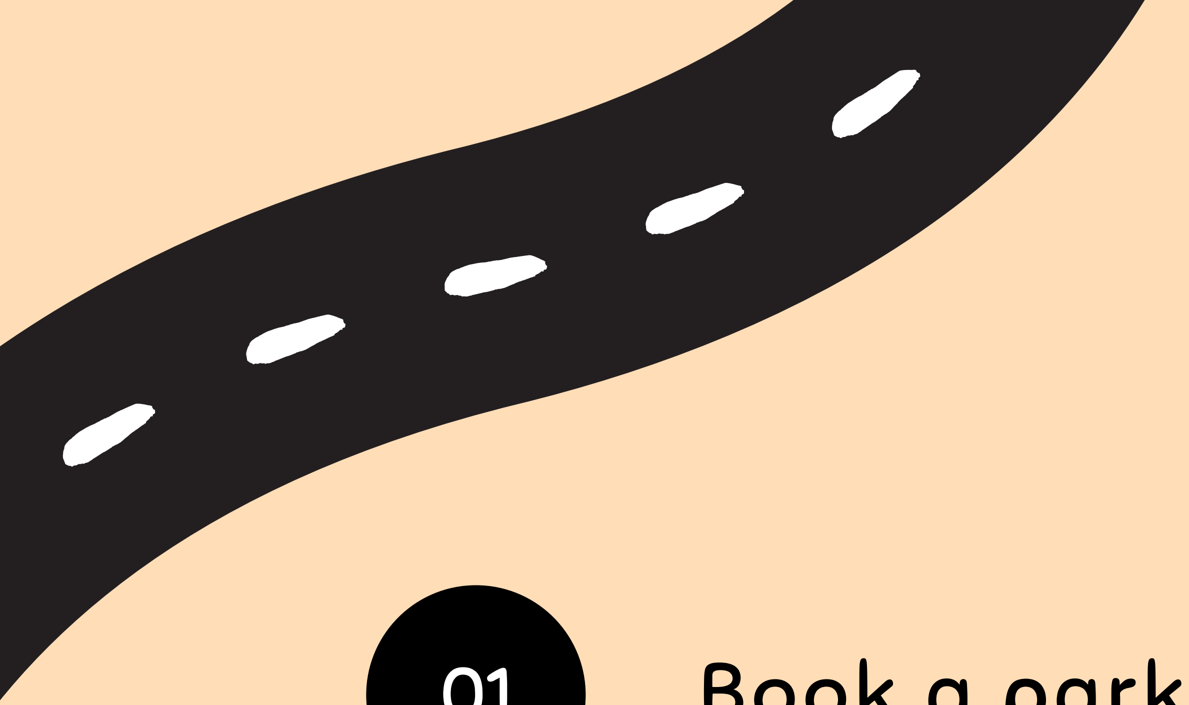




PROJECT IDEA

DEVELOPING A SIMPLE SYSTEM FOR PARKING SLOT BOOKING.

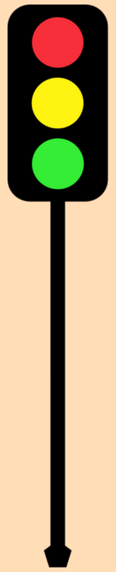




KEY FEATURES

01 Book a parking slot using a car's plate number.

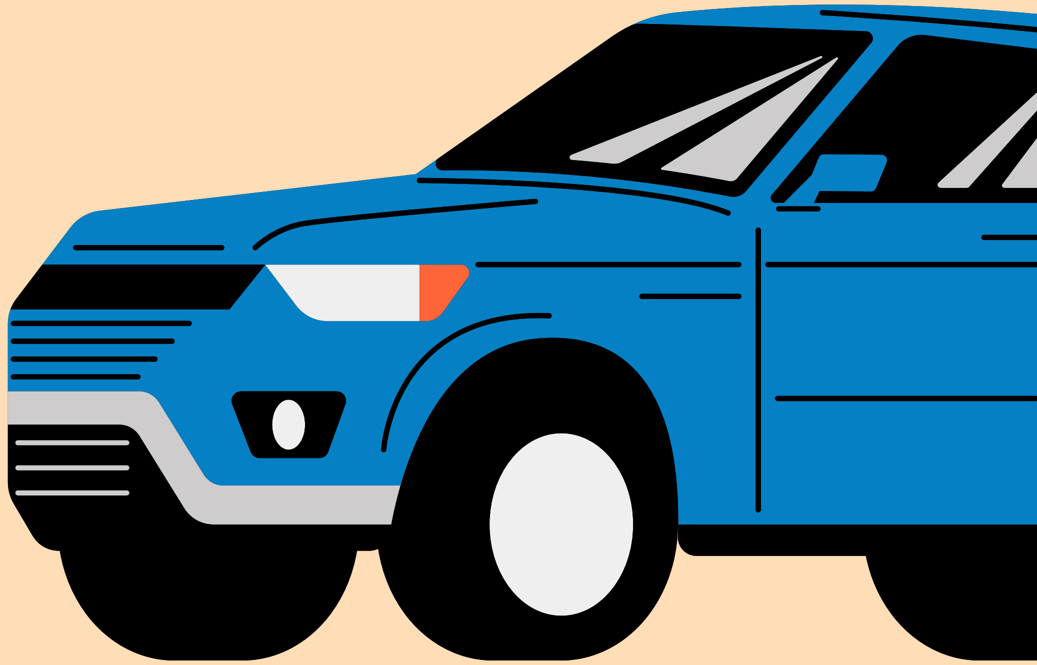
02 Cancel a reserved parking slot.



03 Display all parking slots and their availability status.

04 Add a new parking slot dynamically.

05 Calculate and print an invoice for the reservation.



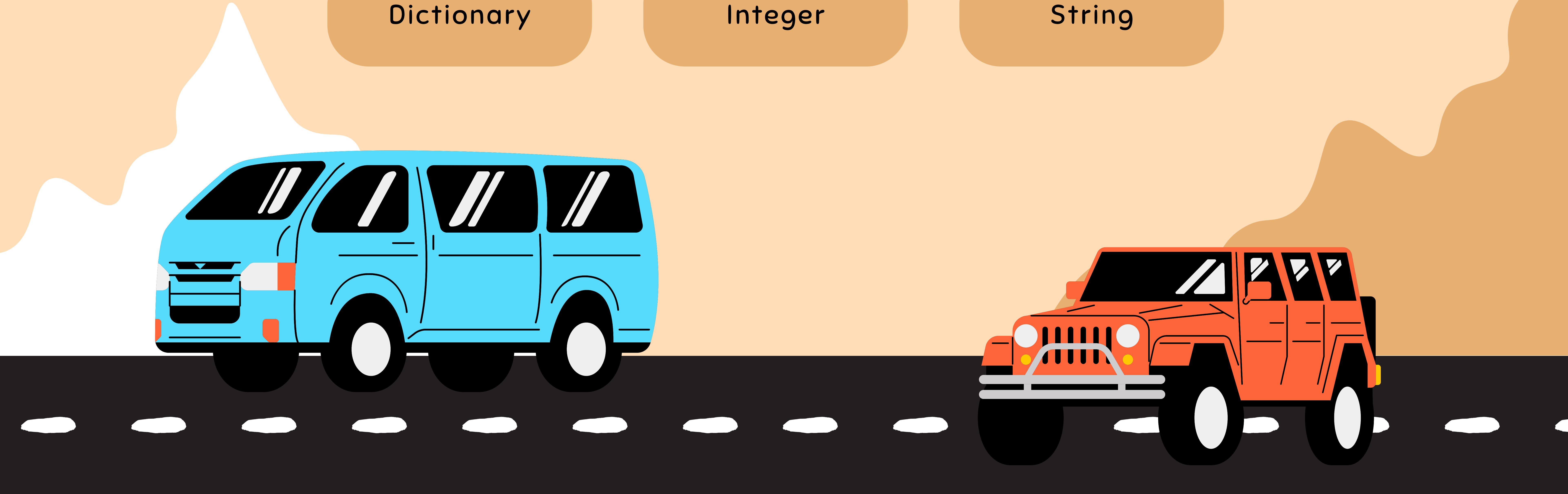
REQUIREMENTS

01 Use at least 3 different data types.

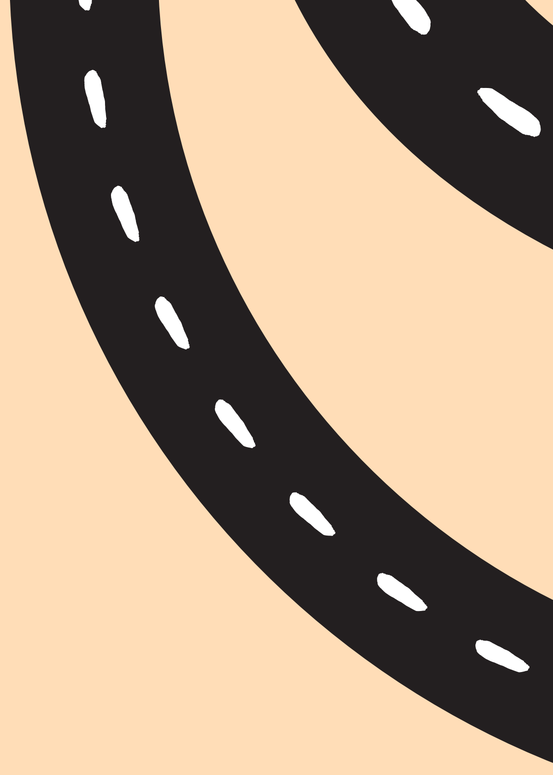
Dictionary

Integer

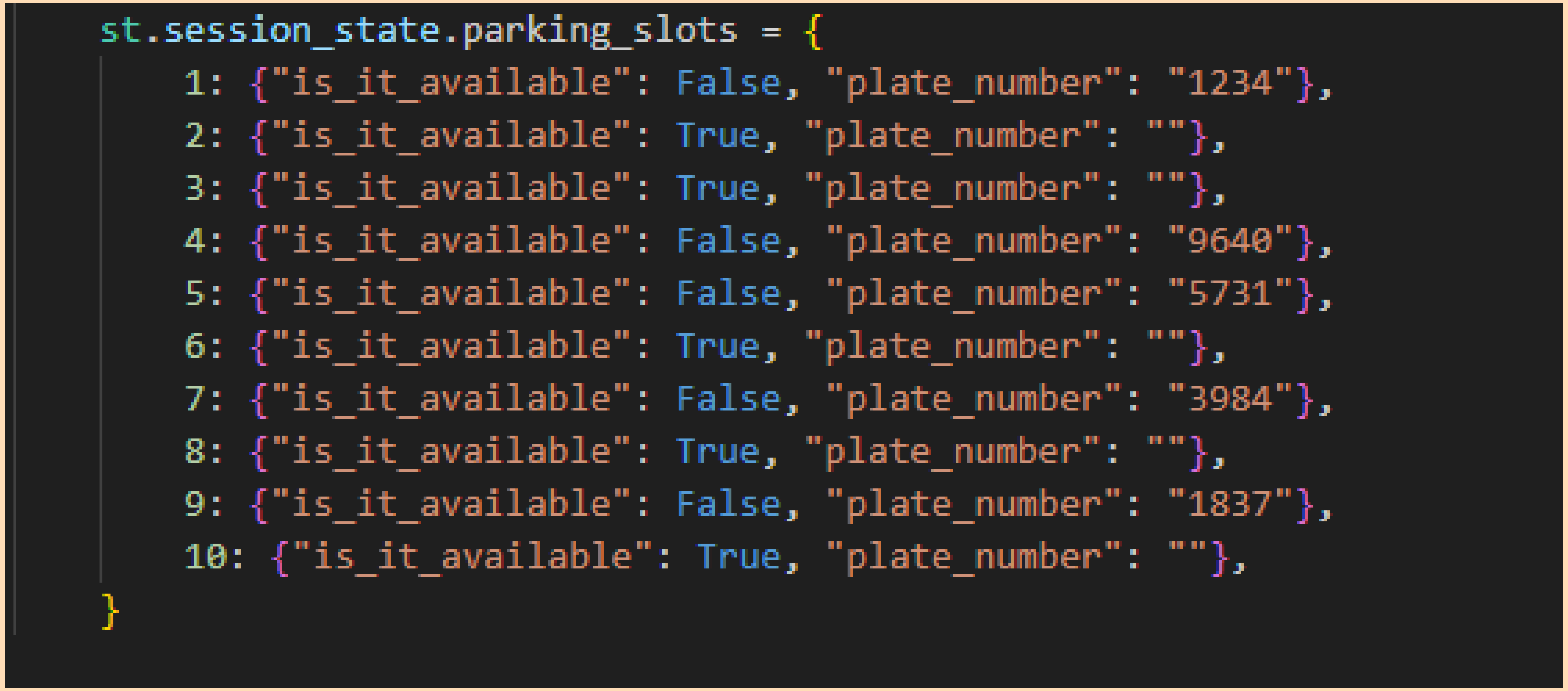
String



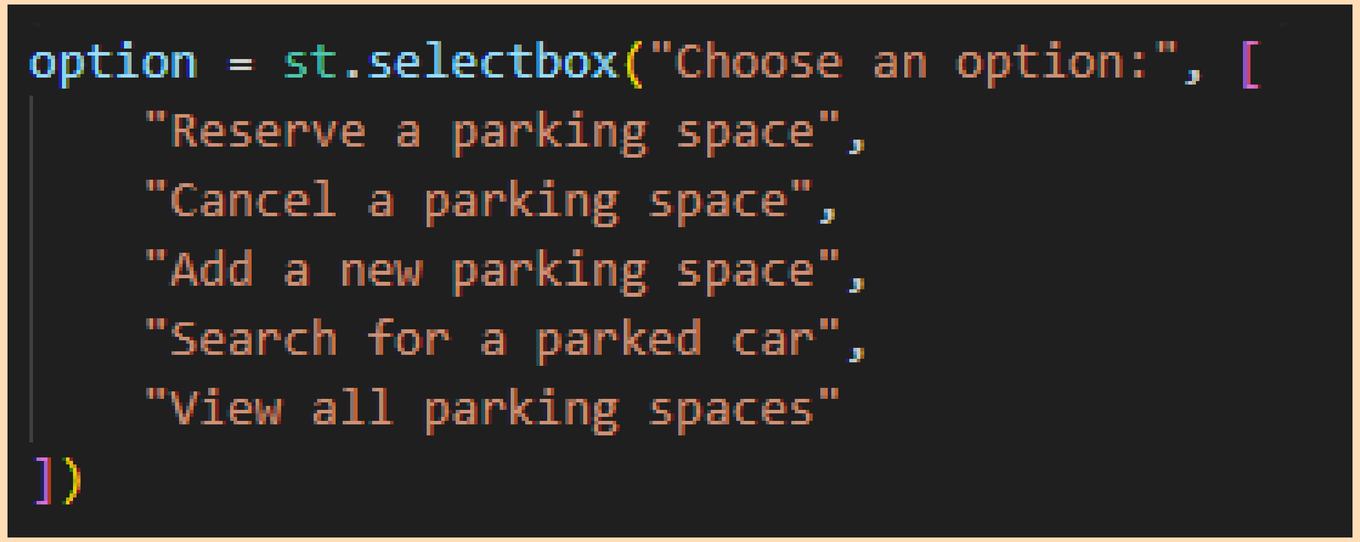
REQUIREMENTS



02 Use lists or dictionaries or tuples or sets.



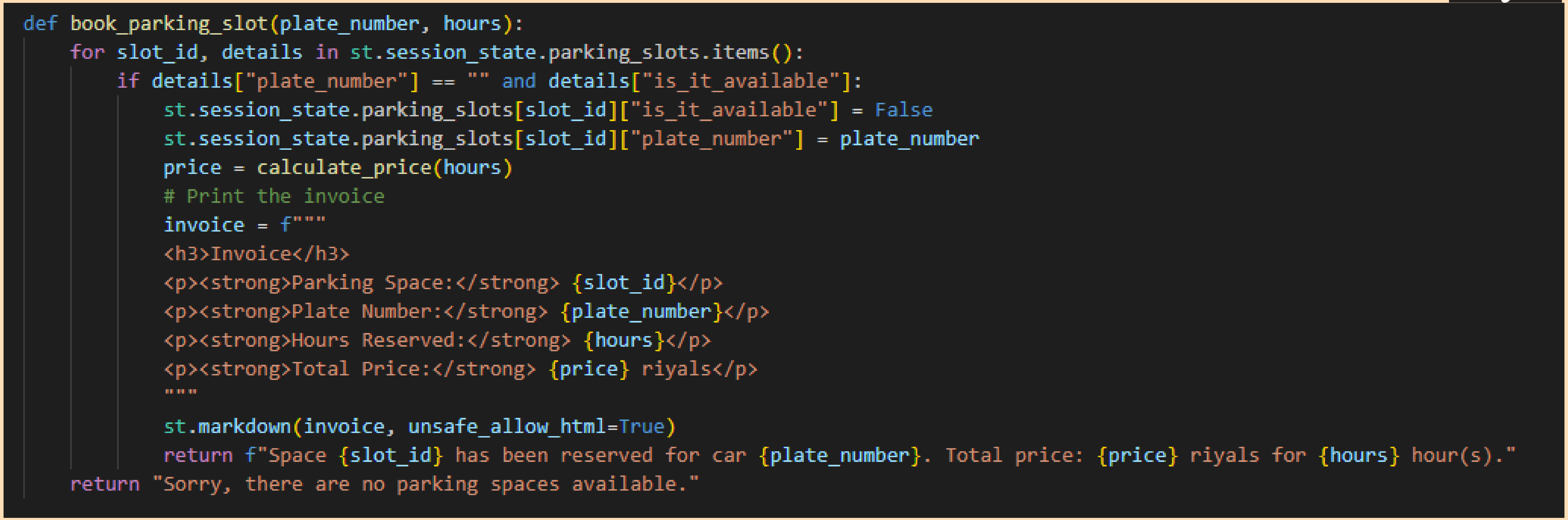
```
st.session_state.parking_slots = {
    1: {"is_it_available": False, "plate_number": "1234"},
    2: {"is_it_available": True, "plate_number": ""},
    3: {"is_it_available": True, "plate_number": ""},
    4: {"is_it_available": False, "plate_number": "9640"},
    5: {"is_it_available": False, "plate_number": "5731"},
    6: {"is_it_available": True, "plate_number": ""},
    7: {"is_it_available": False, "plate_number": "3984"},
    8: {"is_it_available": True, "plate_number": ""},
    9: {"is_it_available": False, "plate_number": "1837"},
    10: {"is_it_available": True, "plate_number": ""},
}
```



```
option = st.selectbox("Choose an option:", [
    "Reserve a parking space",
    "Cancel a parking space",
    "Add a new parking space",
    "Search for a parked car",
    "View all parking spaces"
])
```

REQUIREMENTS

03 Use loops.

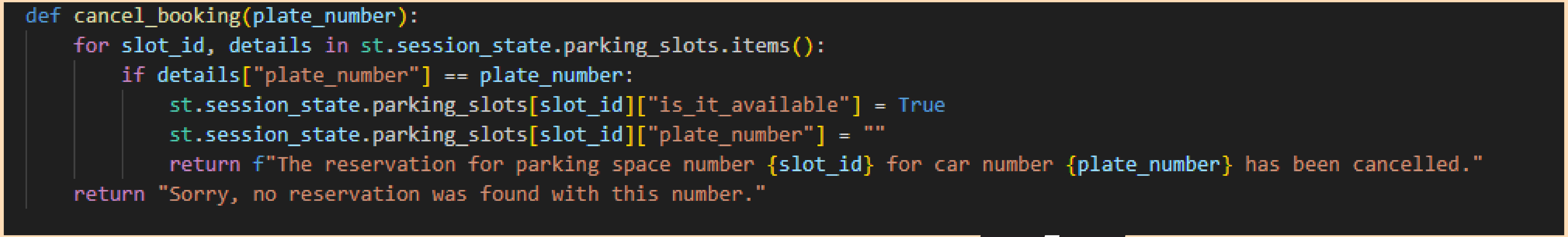


```
def book_parking_slot(plate_number, hours):
    for slot_id, details in st.session_state.parking_slots.items():
        if details["plate_number"] == "" and details["is_it_available"]:
            st.session_state.parking_slots[slot_id]["is_it_available"] = False
            st.session_state.parking_slots[slot_id]["plate_number"] = plate_number
            price = calculate_price(hours)
            # Print the invoice
            invoice = f"""
            <h3>Invoice</h3>
            <p><strong>Parking Space:</strong> {slot_id}</p>
            <p><strong>Plate Number:</strong> {plate_number}</p>
            <p><strong>Hours Reserved:</strong> {hours}</p>
            <p><strong>Total Price:</strong> {price} riyals</p>
            """

            st.markdown(invoice, unsafe_allow_html=True)
            return f"Space {slot_id} has been reserved for car {plate_number}. Total price: {price} riyals for {hours} hour(s)."
    return "Sorry, there are no parking spaces available."
```

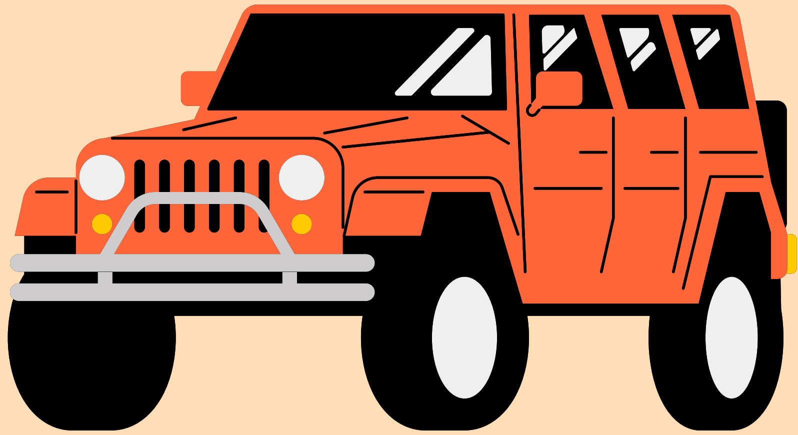
REQUIREMENTS

04 Use functions that return an output.

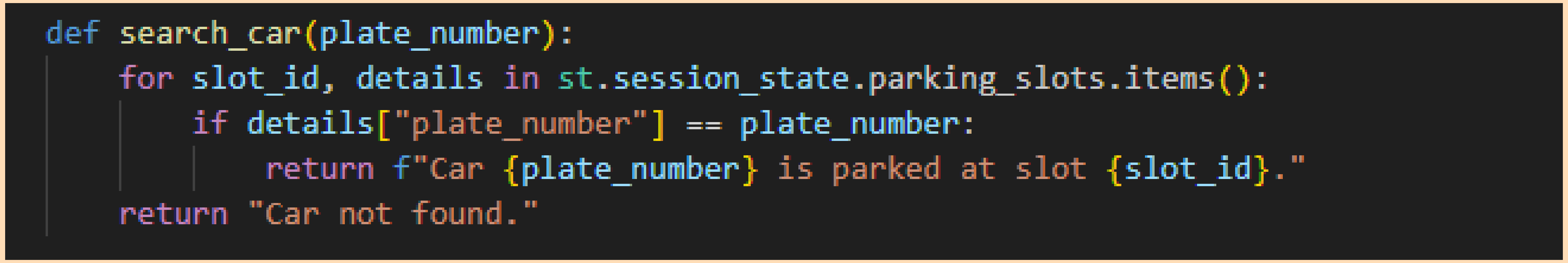


```
def cancel_booking(plate_number):
    for slot_id, details in st.session_state.parking_slots.items():
        if details["plate_number"] == plate_number:
            st.session_state.parking_slots[slot_id]["is_it_available"] = True
            st.session_state.parking_slots[slot_id]["plate_number"] = ""
            return f"The reservation for parking space number {slot_id} for car number {plate_number} has been cancelled."
    return "Sorry, no reservation was found with this number."
```

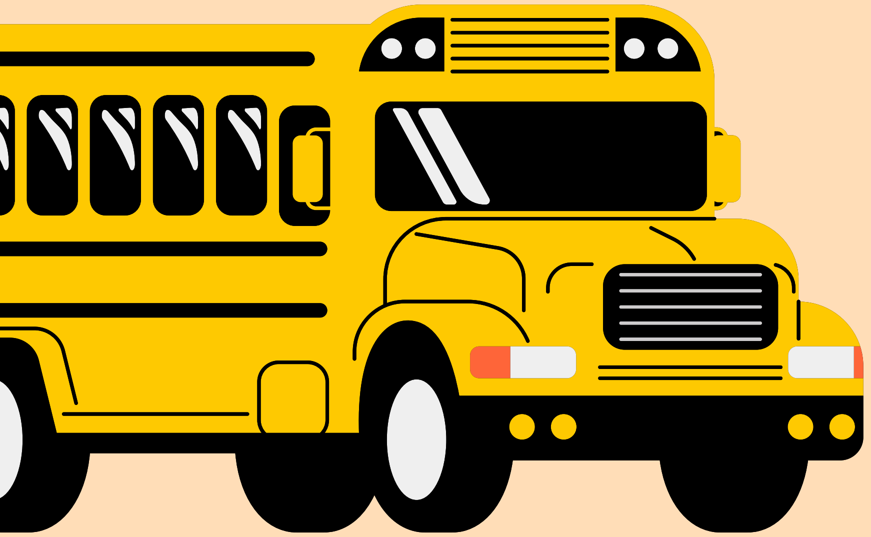
REQUIREMENTS



05 Use conditions.



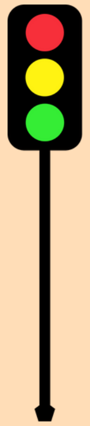
```
def search_car(plate_number):
    for slot_id, details in st.session_state.parking_slots.items():
        if details["plate_number"] == plate_number:
            return f"Car {plate_number} is parked at slot {slot_id}."
    return "Car not found."
```

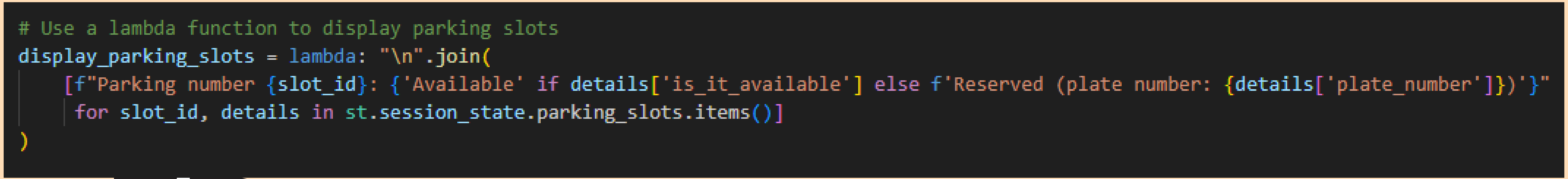


REQUIREMENTS

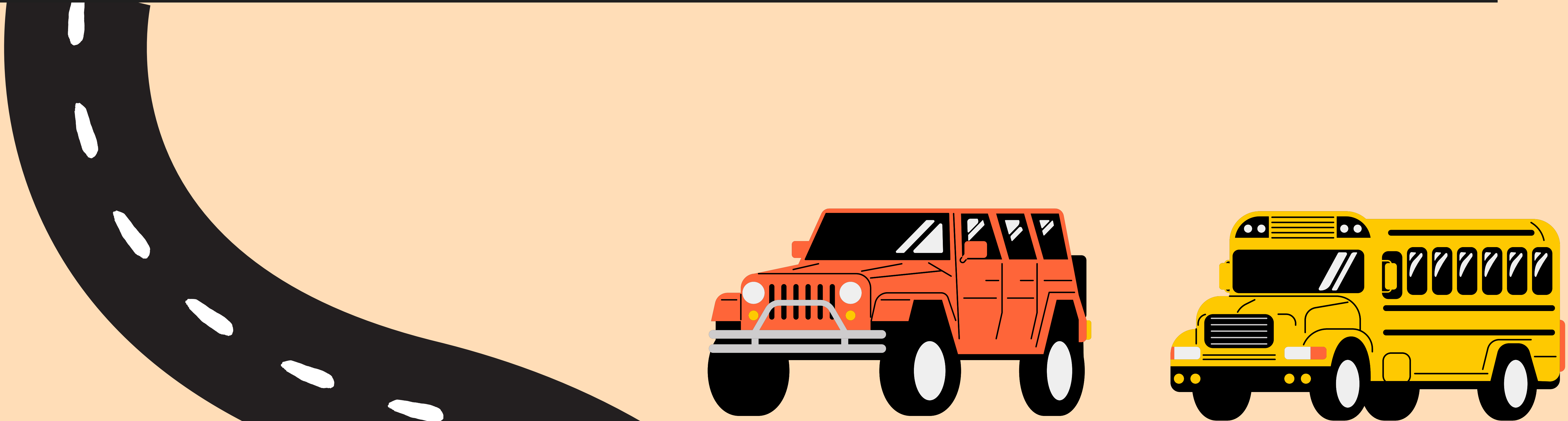
06

Use a Lambda function.

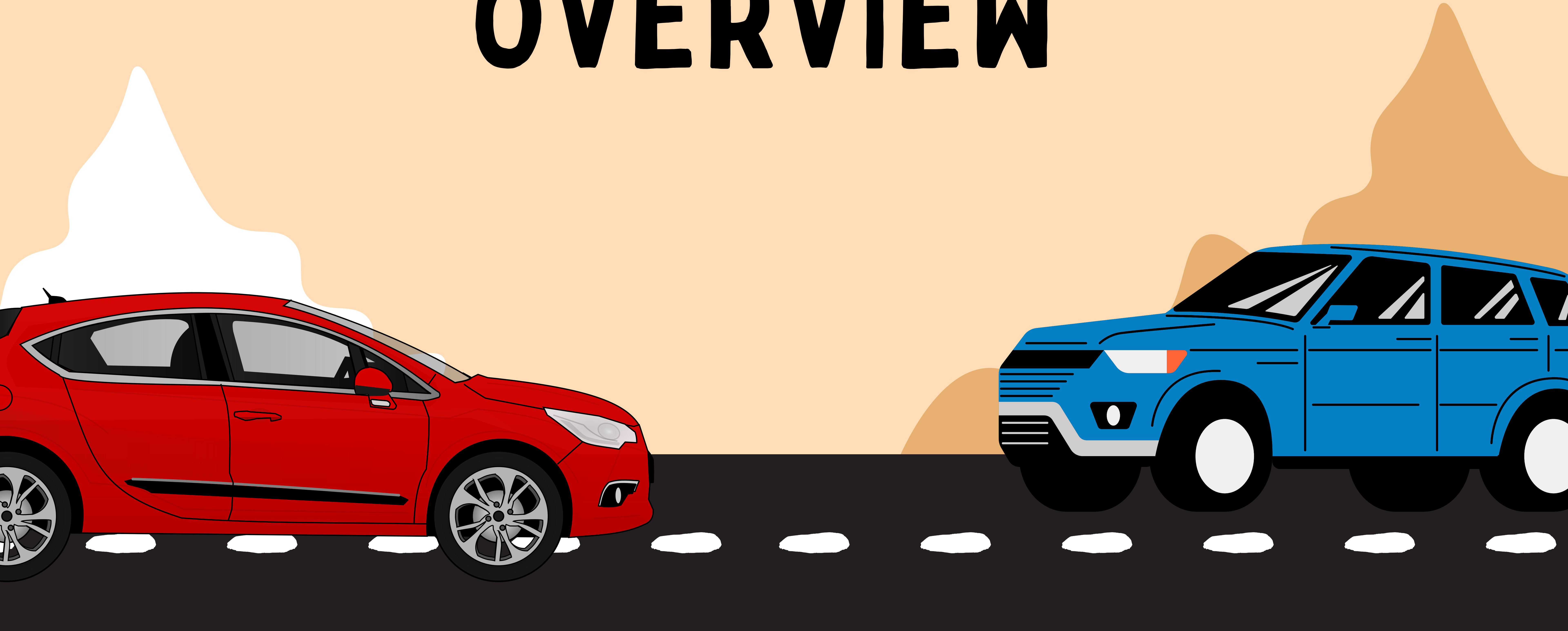




```
# Use a lambda function to display parking slots
display_parking_slots = lambda: "\n".join(
    [f"Parking number {slot_id}: {'Available' if details['is_it_available'] else f'Reserved (plate number: {details['plate_number']})'}"
     for slot_id, details in st.session_state.parking_slots.items()]
)
```



OVERVIEW



THANK YOU FOR LISTENING