

Building Dynamic Frontend Components

Objective:

On Day 4 the goal was to create dynamic and reusable components for my car rental website. This was a crucial step in enhancing the website's functionality and improving the user experience. The main components I focused on included a **search bar**, **product listing**, **user profile integration** using Clerk authentication, **Add to Cart** and **Checkout page**.

Tasks Completed

1. Search Bar Component

To improve the search functionality, I built a dynamic search bar that allows users to filter car listings by name in real-time.

Steps Taken:

- Developed a **Search Component** that takes user input and filters car data dynamically.
- Used **React State** to store the search query and update the filtered results in real-time.
- Ensured the search bar is **"responsive and user-friendly"**, enhancing the overall UX.

Outcome:

- Users can now **instantly search and filter** cars, making it easier to find relevant listings.

2. Product Listing Component

A dynamic product listing component was created to display car rental options efficiently.

Steps Taken:

- Developed a reusable component that maps over an array of car listings and displays them dynamically.
- Integrated the product listing with Sanity CMS, fetching live data.
- Ensured that each product card displays essential details like car name, brand, and price.

Outcome:

- The website now dynamically displays car listings fetched from the backend, ensuring an interactive experience for users.

3. Add to Cart

To enhance the booking experience, I implemented an Add to Cart feature.

Steps Taken:

- Developed an AddToCart component that allows users to select cars they want to rent.
- Created a Cart page where users can view selected cars, update quantities, or remove items.
- Ensured the cart maintains the selected items persistently.

Outcome:

Users can now add cars to their cart and review their selections before proceeding to checkout.

4. Checkout System

A smooth and secure Checkout system was developed to finalize car rentals.

Steps Taken:

- Implemented a Checkout component that guides users through the rental confirmation process.**
- Integrated payment gateway functionality for seamless transactions.**
- Ensured secure handling of user data and payments.**

Outcome:

Users can now proceed to checkout effortlessly, making their car rental experience smooth and efficient.