BUILDING DYNAMIC FRONTEND COMPONENTS FOR CAR RENTAL ECOMMERCE

Introduction:

Day 4 of Marketplace Builder was all about improving the frontend by creating **dynamic components** with Next.js and Tailwind CSS. I also worked on **dynamic routing** to make navigation smooth and user-friendly.

 I also **used APIs** to **fetch** data for the frontend, making the platform **dynamic** and **functional**. This was a big step in making the app look great while being easy to use for everyone.

The Key working done is as follows:

- •**Data Fetching** from sanity schema,

- •**Dynamic Routing** for each product,

- • **Pickup & DropOff** booking facility,

- • **Review** Page,

- • **Search and Filter** facility,

- • **Whishlist** feature,

- •**Notification** feature,

- • **Analytics Dashboard** for tracking data,

- • **Sign In / Sign Up** pages,

- • **User Dashboard** and **Admin Dashboard** to manage everything,

Let's take a closer look at how these features came together and how they help build an awesome rental eCommerce platform!

Content:

1. Frontend: Data Fetching

Here's how the fetched data will look in the frontend, displayed based on the query you wrote in queries.ts:

Popular Cars   View All

Koenigsegg	Nissan GT-R	CR-V	All New Terlos
Sport	Sport	SUV	SUV
90LL Manual 2 People	80LL Manual 2 People	80LL Manual 6 People	90LL Manual 6 People
$$99.00 /day Rent Now	$$80.00 /day Rent Now	$$80.00 /day Rent Now	$$74.00 /day Rent Now

Recommended Cars

Nissan GT-R	Tesla Model 3	Mercedes-Benz C-Class	Rolls-Royce
Sport	Electric	Gasoline	Sedan
80LL Manual 2 People people	100kWhL Manual 5 seats people	65LL Manual 5 seats people	70LL Manual 4 People people
$$80.00.00 /day Rent Now	$$100.00.00 /day Rent Now	$$140.00.00 /day Rent Now	$$96.00.00 /day Rent Now

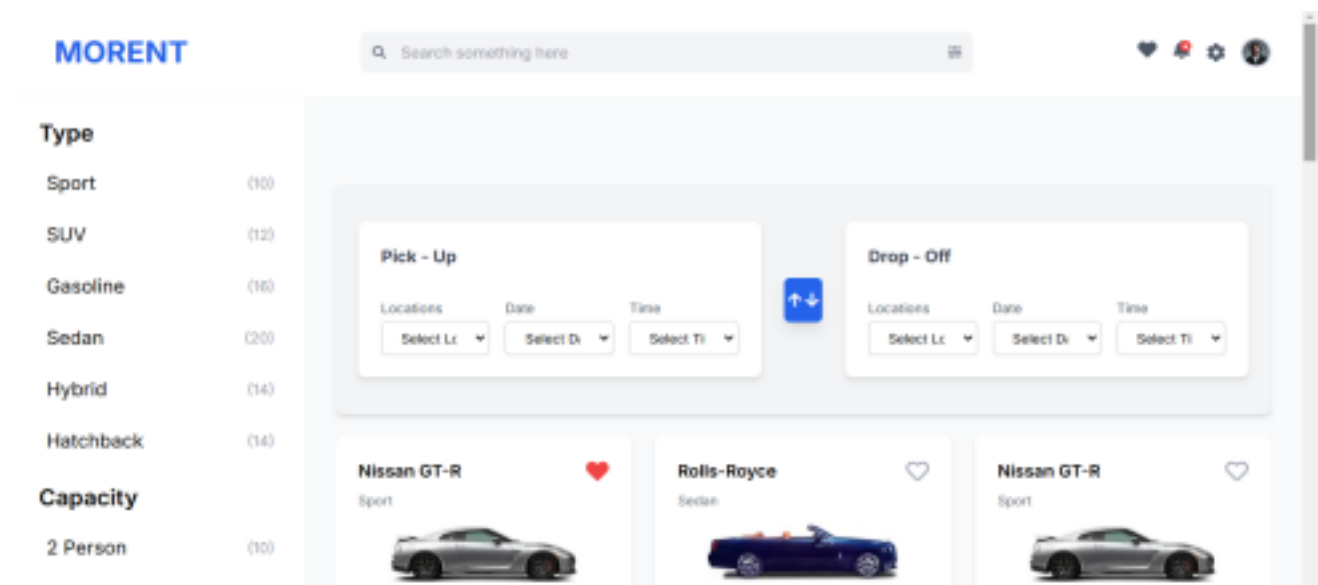| BMW X5	Chevrolet Camaro	Nissan Altima	MG ZX Exclusive
Diesel	Gasoline	Hybrid	Hatchback
70LL Manual 7 seats people	70LL Manual 4 seats people	50LL Manual 5 seats people	90LL Manual 2 People people
$$150.00.00 /day Rent Now	$$110.00.00 /day Rent Now	$$90.00.00 /day Rent Now	$$99.00.00 /day Rent Now

2. Category Page: Dynamic Filtering from Sanity

• The **Category Page** dynamically fetches products from Sanity, allowing users to explore different car categories.
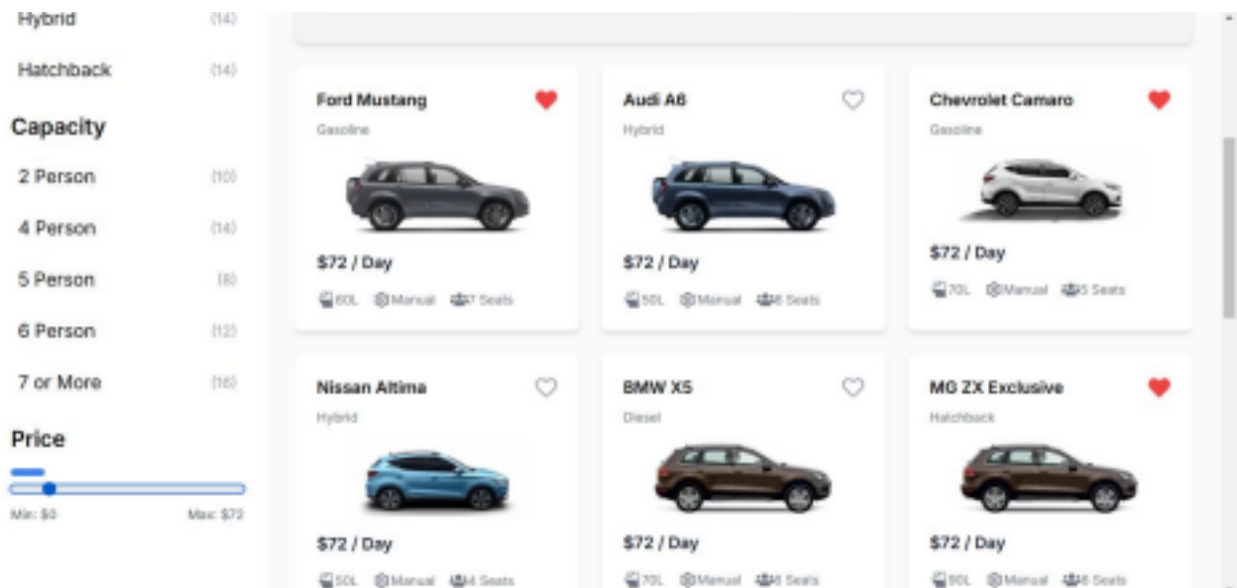
❖ Here's a breakdown of how the filtering works:

o **Type Filter**: Filters cars based on their type (e.g., sedan, SUV).

o **Capacity Filter**: Allows filtering cars by their seating capacity.

o **Price Filter**: Filters cars within a specific price range.

Dynamic Filtering from Sanity:

   ❖ As shown in the image, when you apply a filter, such as the price range, the page dynamically updates to display the relevant products.
   ❖ The data is fetched from Sanity, ensuring that the product list reflects your selected filters in real-time.
   ❖ This functionality allows users to easily narrow down their choices based on type, capacity, or price range, enhancing their browsing experience.

3. Pickup and Drop-Off: Seamless Booking:

In this section, users can select their preferred **city**, **date**, and **time** for pickup and drop-off. Once the details are entered, the system checks car availability for the chosen slot.

• If a car is available, the message **"Car is available in this slot"** will appear.

  • If no cars are available, the message **"No car is available in this slot"** will be displayed.

Car is available for your selected options!

Pick - Up

Locations	Date	Time
Karachi	Today	Morning

↑↓

Drop - Off

Locations	Date	Time
Lahore	Today	Morning

No cars available for the selected options.

Pick - Up

Locations	Date	Time
Karachi	Today	Morning

↑↓

Drop - Off

Locations	Date	Time
Karachi	Next Week	Morning

4. Dynamic Routing with Sanity Integration

- Fetches Data: Retrieves blog posts from Sanity CMS dynamically.
- Dynamic Pages: Routes to detailed pages based on the post's slug.
- Navigation: Clicking a post title redirects to its detail page.
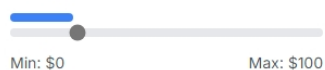- Error Handling: Displays a 404 page if no matching post is found.

Type

Sport	10
SUV	12
Gasoline	16
Sedan	20
Hybrid	14
Hatchback	14

Capacity

2 Person	10
4 Person	14
5 Person	8
6 Person	12
7 or More	16

Price

Min: $0   Max: $100

Easy way to rent a car at a low price

Providing cheap car rental services and safe and comfortable facilities.

Rental Car

CR-V

440+ Reviewers

★★★★★

NISMO has become the embodiment of CR-V outstanding performance, inspired by the most unforgiving proving ground, the "race track."

Type: SUV   **Capacity:** 6 People
Seats: 6   **Transmission:** Manual
People

N/A N/A

Rent Now

5. Reviews Page

• Display Reviews: Users can view a list of reviews with ratings, comments, and profile pictures.

• Add New Reviews: Users can submit their own reviews with a form that includes their name, role, comment, profile picture, and rating.

• Star Rating: Reviews are rated on a 5-star scale with clickable stars for rating. • Profile Picture Upload: Users can upload a profile picture that will be displayed with their review.

6. Search and Filter:

- Search cars by name or price.
- Filter cars based on price range.
- Quickly find cars that fit your budget and preferences.
- User friendly and efficient for a personalized experience.

te

Popular Cars

All New Terlos

SUV

90L | Manual | 6 People

$$74.00 /day — Rent Now

Tesla Model 3

Electric

100kWh | Manual | 5 seats

$$100.00 /day — Rent Now

Recommended Cars

rolls

Popular Cars

Rolls-Royce

Sedan

70L | Manual | 4 People

$$96.00 /day — Rent Now

Rolls-Royce

SUV

70L | Manual | 6 People

$$72.00 /day — Rent Now

7.Wishlist Feature

Since you have the freedom to add extra functionality, a great addition would be a **Wishlist** feature. This allows users to save their favorite cars for later reference. In the image, you can see how this functionality works. users can click on a "heart" icon to add a car to their wishlist. The wishlist will be saved and accessible across sessions. This feature can significantly enhance user experience by letting them easily revisit cars they're interested in.

Your Wishlist

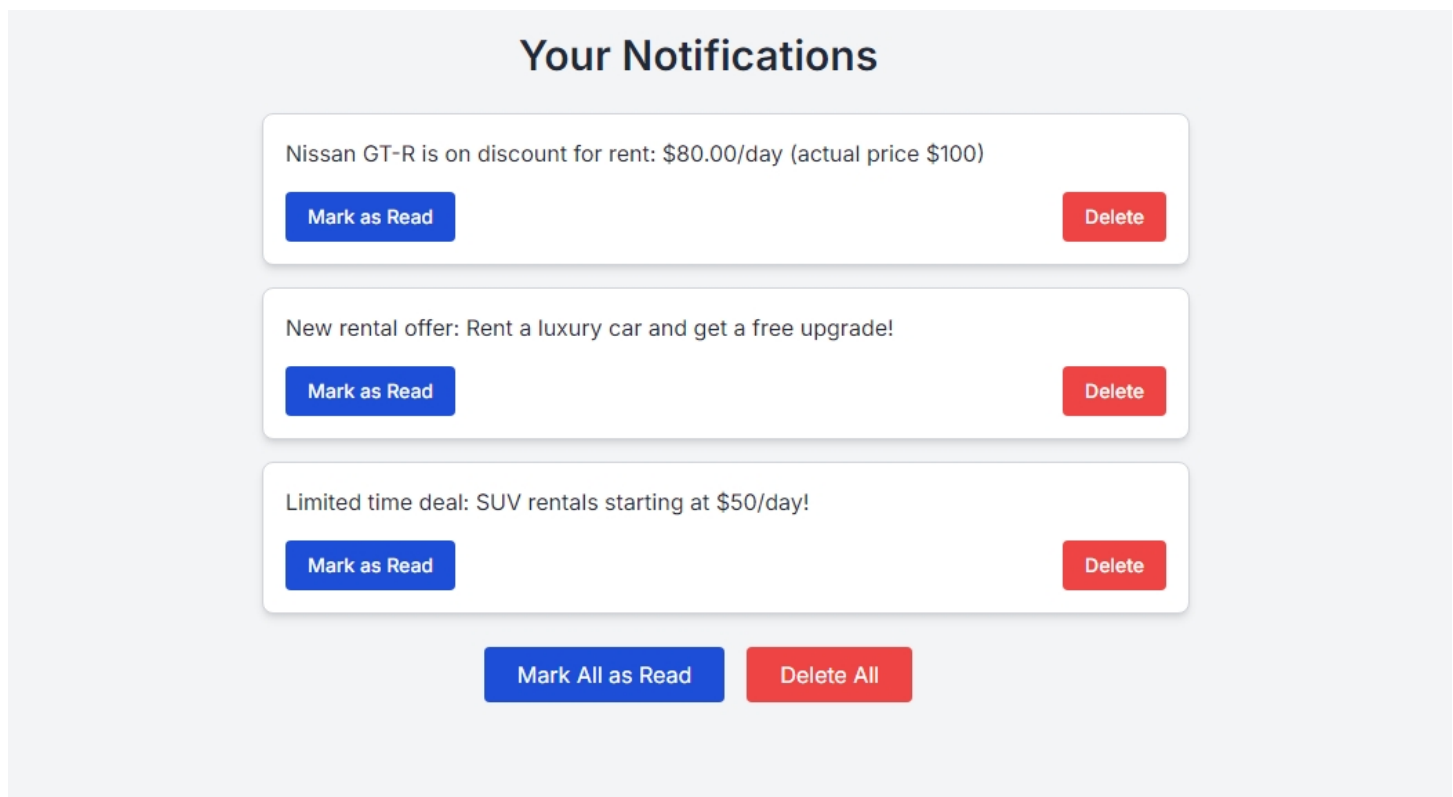| Audi A6 ❤️	Chevrolet Camaro ❤️	Tesla Model 3 ❤️	Nissan GT-R ❤️
Hybrid	Gasoline	Electric	Sport
🚪 50L ⚙️ Manual 👥 5 seats	🚪 70L ⚙️ Manual 👥 4 seats	🔋 100kWh ⚙️ Manual 👥 5 seats	🚪 80L ⚙️ Manual 👥 2 People
$$120.00 /day [Rent Now]	$$110.00 /day [Rent Now]	$$100.00 /day [Rent Now]	$$80.00 /day [Rent Now] $$100.00

CR-V ❤️
SUV

🚪 80L ⚙️ Manual 👥 6 People

$$80.00 /day   [Rent Now]

8. Your Notifications

❖ Mark as Read: Clicking "Mark as Read" changes the notification's appearance and

disables the button.

❖ Delete: Clicking "Delete" removes the notification from the list.

❖ Action Buttons:

   o Mark All as Read: Marks all notifications as read.

   o Delete All: Deletes all notifications.

      ❖ Empty State: Shows "No notifications available" when empty.

9. Car Rental Analytics Dashboard :

The Car Rental Analytics Dashboard provides a comprehensive overview of key metrics and performance insights, helping you make data-driven decisions.

❖ KPI Metrics: Displays essential statistics like:

o Total Bookings: Tracks the number of car rentals.

o Total Revenue: Monitors monthly earnings.

o Active Users: Keeps count of active users and shows trends.

❖ Bar Chart:

o Visualizes monthly revenue trends, providing a clear picture of earnings over time.

❖ Line Chart:

o Tracks car bookings by month to identify peak periods.

❖ Pie Chart:

o Displays the distribution of bookings by car type, such as sedans, SUVs, luxury cars, and economy cars.

Car Rental Analytics Dashboard

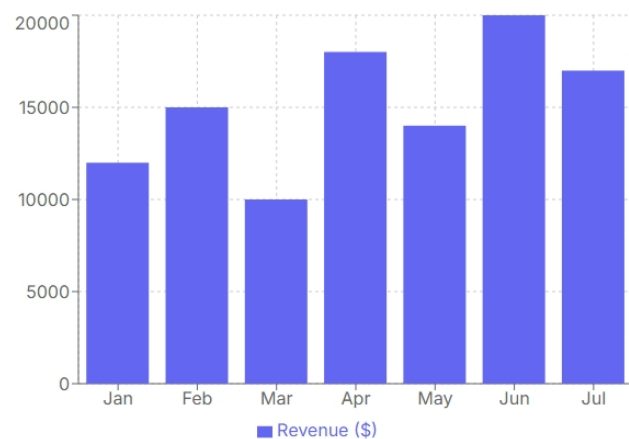| Total Bookings	Total Revenue	Active Users
1,234	**$56,789**	**3,456**
+8.5%	+12.3%	-2.1%

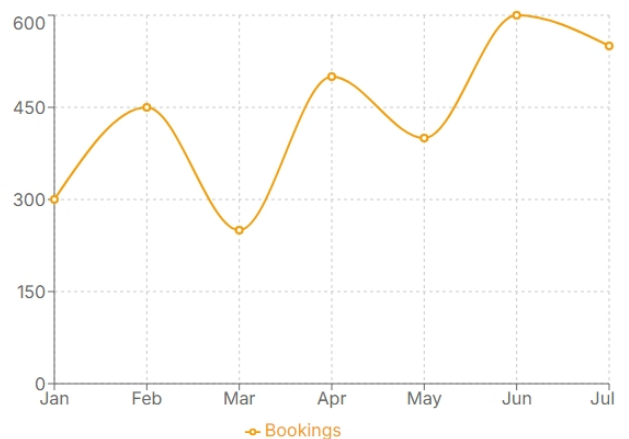### Monthly Revenue

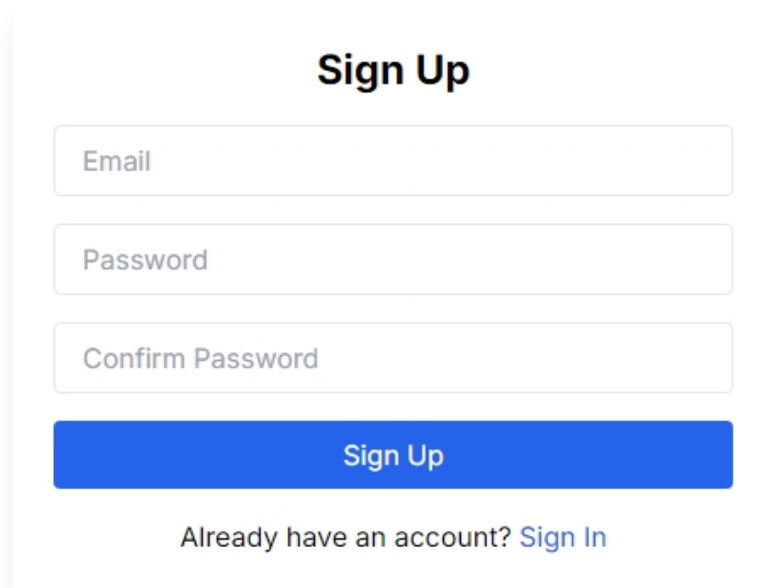Track your monthly revenue from car rentals.

■ Revenue ($)

Monthly Bookings

Monitor the number of car bookings per month.

○ Bookings

18.Signup Page:

❖ User Registration: Allows users to create a new account by entering their email,
   password, and confirming the password.
❖ Form Validation: Ensures the passwords match before submission. Displays error
   messages for incorrect inputs.
❖ Local Storage: User data is temporarily stored in localStorage for this example.
❖ Navigation: Redirects users to the Sign-In page after successful registration.
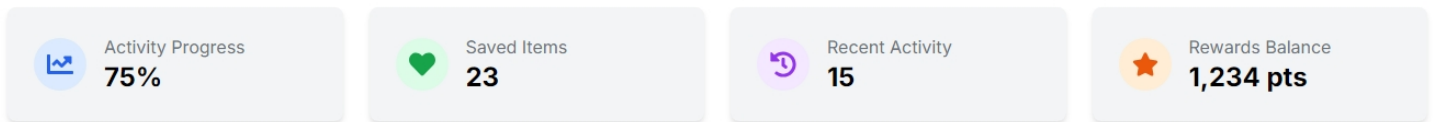
19.User Dashboard:

❖ Personalized Overview: Key stats like activity progress, saved items, and rewards.
❖ Theme Toggle: Switch between light and dark themes.

❖ Profile Section: View user details (email, password).

❖ Settings: Access account, security, and notification settings

User Dashboard
Welcome back, hello@example.com!

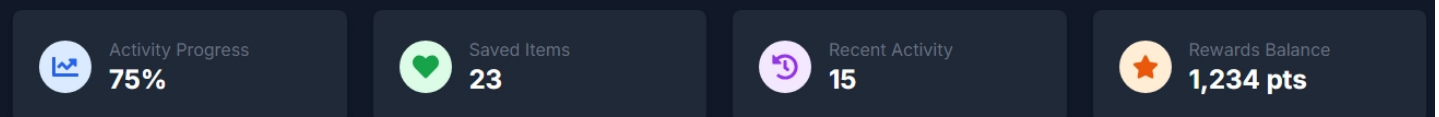| Activity Progress 75% | Saved Items 23 | Recent Activity 15 | Rewards Balance 1,234 pts |

Your Profile

hello@example.com
Email: hello@example.com
Password: 12345

Settings

Account Settings
Update your account details.

Security
Change your password.

Notifications
Manage your notifications.

User Dashboard
Welcome back, hello@example.com!

| Activity Progress 75% | Saved Items 23 | Recent Activity 15 | Rewards Balance 1,234 pts |

Your Profile

hello@example.com
Email: hello@example.com
Password: 12345

Settings

Account Settings
Update your account details.

Security
Change your password.

Notifications
Manage your notifications.

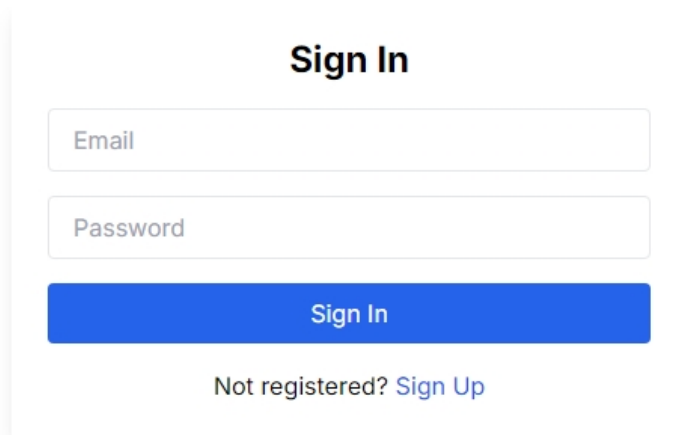## 20. Sign InPage:

❖ User Authentication: Validates credentials against stored data in localStorage.

❖ Error Handling: Displays error messages for invalid credentials or missing user data. ❖ Role-Based Navigation: Redirects to either the user dashboard or admin dashboard based on credentials.

❖ Sign Up Link: Provides a link to the sign-up page for new users

Sign In

Email

Password

Sign In

Not registered? Sign Up

Conclusion:

Thank you for reviewing today's report. I hope it offers a clear understanding of the steps and insights gained during **Day 4**, especially regarding working with the API and Sanity.

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