Hackathon Day 3: API Integration and Data Migration

Overview

Day 3 of the hackathon involved a critical task: integrating APIs and migrating data into the Sanity CMS and Fetch it in Frontend to create a dynamic and fully functional marketplace backend.

Key Steps and Implementation Details

1. Environment Variable Configuration

- The `.env.local` file was used to store sensitive credentials for Sanity CMS and API integration.
- The `dotenv` package was configured in the `migrate.mjs` script to load environment variables, ensuring secure and flexible development.

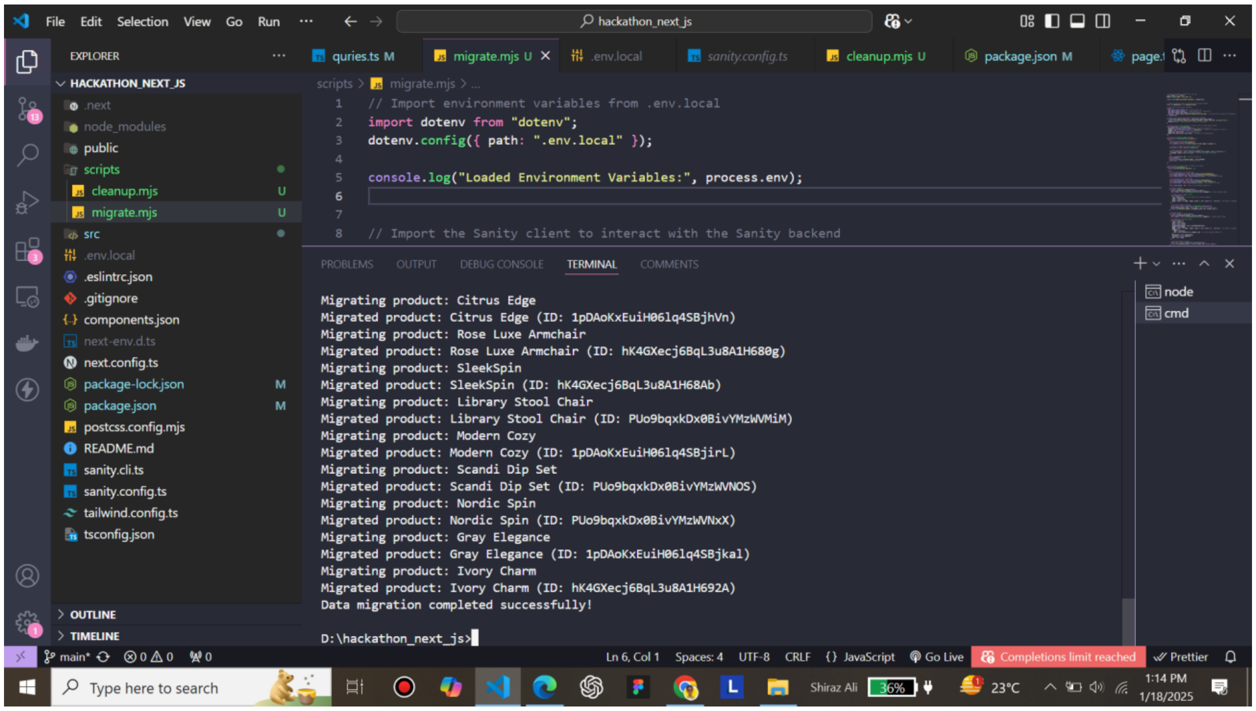
2. Sanity Client Setup

- The Sanity client was initialized using the `@sanity/client` package.
- Environment variables like `NEXT_PUBLIC_SANITY_PROJECT_ID`, `NEXT_PUBLIC_SANITY_DATASET`, and `NEXT_PUBLIC_SANITY_AUTH_TOKEN` were passed to configure the client.
- A check was implemented to ensure all required variables were loaded, halting execution if any were missing. This approach enhanced error handling and debugging.

3. Data Migration Script

- The `migrate.mjs` script automated the migration of product data into the Sanity CMS.
- **Process**:
  1. Products were fetched from an API endpoint.
  2. Images were uploaded to Sanity via the `assets.upload` method.
  3. Data, including titles, slugs, prices, and images, was structured into Sanity-compatible schemas.
  4. The `createOrReplace` method ensured that migrated products were correctly inserted or updated.

- **Implementation screenshot**:



```
// Import environment variables from .env.local
import dotenv from "dotenv";
dotenv.config({ path: ".env.local" });

console.log("Loaded Environment Variables:", process.env);

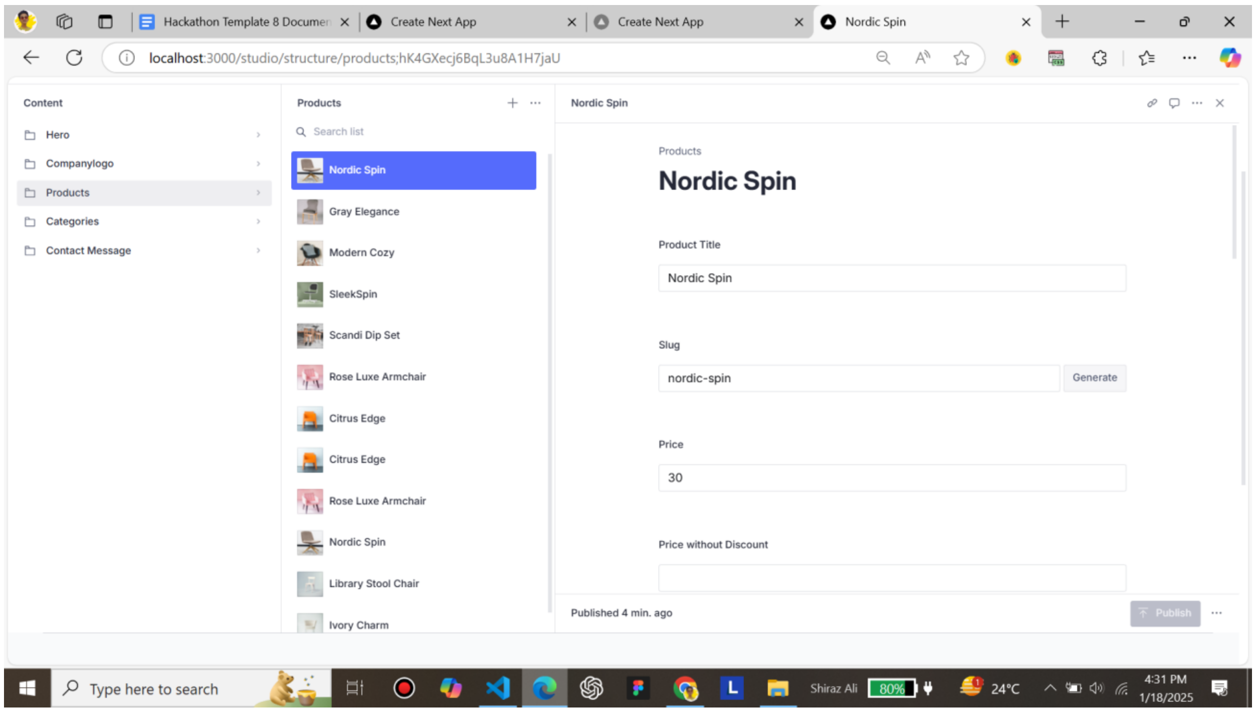

// Import the Sanity client to interact with the Sanity backend
```

```
Migrating product: Citrus Edge
Migrated product: Citrus Edge (ID: 1pDAoKxEuiH06lq4SBjhVn)
Migrating product: Rose Luxe Armchair
Migrated product: Rose Luxe Armchair (ID: hK4GXecj6BqL3u8A1H680g)
Migrating product: SleekSpin
Migrated product: SleekSpin (ID: hK4GXecj6BqL3u8A1H68Ab)
Migrating product: Library Stool Chair
Migrated product: Library Stool Chair (ID: PUo9bqxkDx0BivYMzWVMiM)
Migrating product: Modern Cozy
Migrated product: Modern Cozy (ID: 1pDAoKxEuiH06lq4SBjirL)
Migrating product: Scandi Dip Set
Migrated product: Scandi Dip Set (ID: PUo9bqxkDx0BivYMzWVNOS)
Migrating product: Nordic Spin
Migrated product: Nordic Spin (ID: PUo9bqxkDx0BivYMzWVNxX)
Migrating product: Gray Elegance
Migrated product: Gray Elegance (ID: 1pDAoKxEuiH06lq4SBjkal)
Migrating product: Ivory Charm
Migrated product: Ivory Charm (ID: hK4GXecj6BqL3u8A1H692A)
Data migration completed successfully!

D:\hackathon_next_js>
```

4. Sanity Studio Content Management

- The migrated data appeared in the Sanity Studio interface, demonstrating successful integration.
- Products and categories, such as *Nordic Spin* and *Wing Chair*, were structured with fields like `Product Title`, `Price`, and `Category Image`.
- The screenshots validated the accurate representation of data in the CMS.

- 

localhost:3000/studio/structure/products;hK4GXecj6BqL3u8A1H7jaU

Products: Nordic Spin, Gray Elegance, Modern Cozy, SleekSpin, Scandi Dip Set, Rose Luxe Armchair, Citrus Edge, Citrus Edge, Rose Luxe Armchair, Nordic Spin, Library Stool Chair, Ivory Charm

Products
Nordic Spin

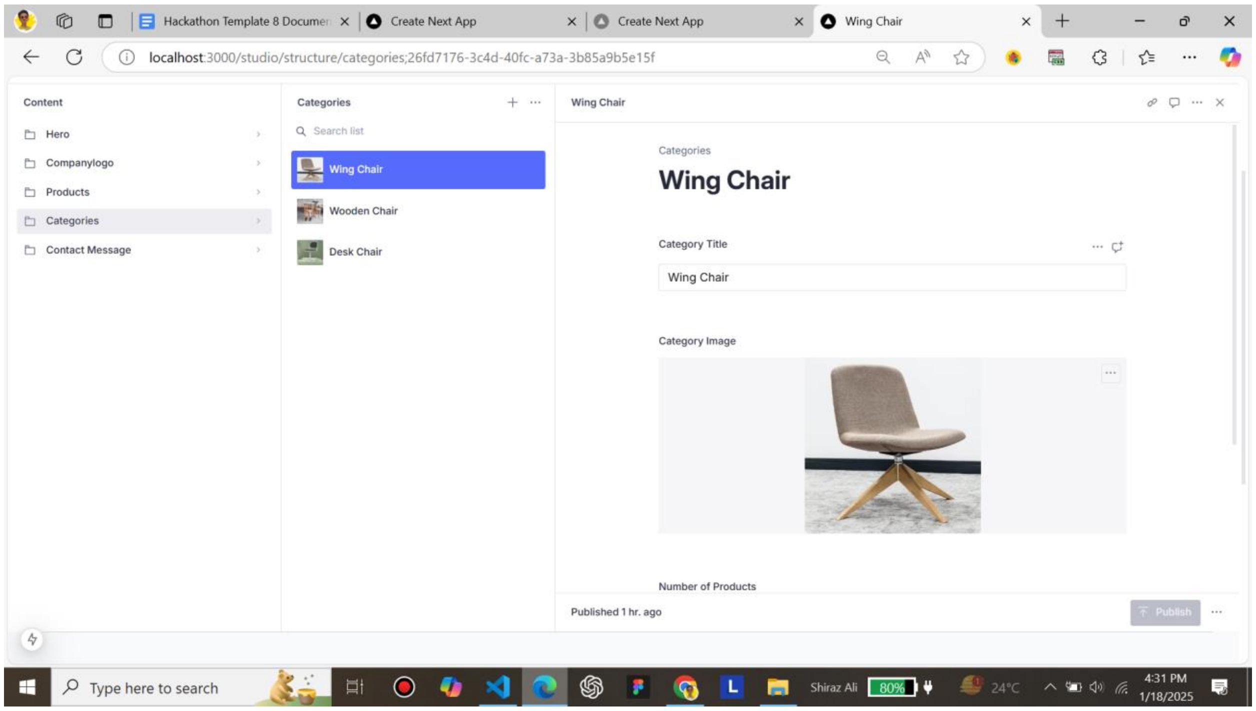
Product Title: Nordic Spin

Slug: nordic-spin

Price: 30

Price without Discount:

Published 4 min. ago



localhost:3000/studio/structure/categories;26fd7176-3c4d-40fc-a73a-3b85a9b5e15f

Categories: Wing Chair, Wooden Chair, Desk Chair

Categories
Wing Chair

Category Title: Wing Chair

Category Image

Number of Products

Published 1 hr. ago

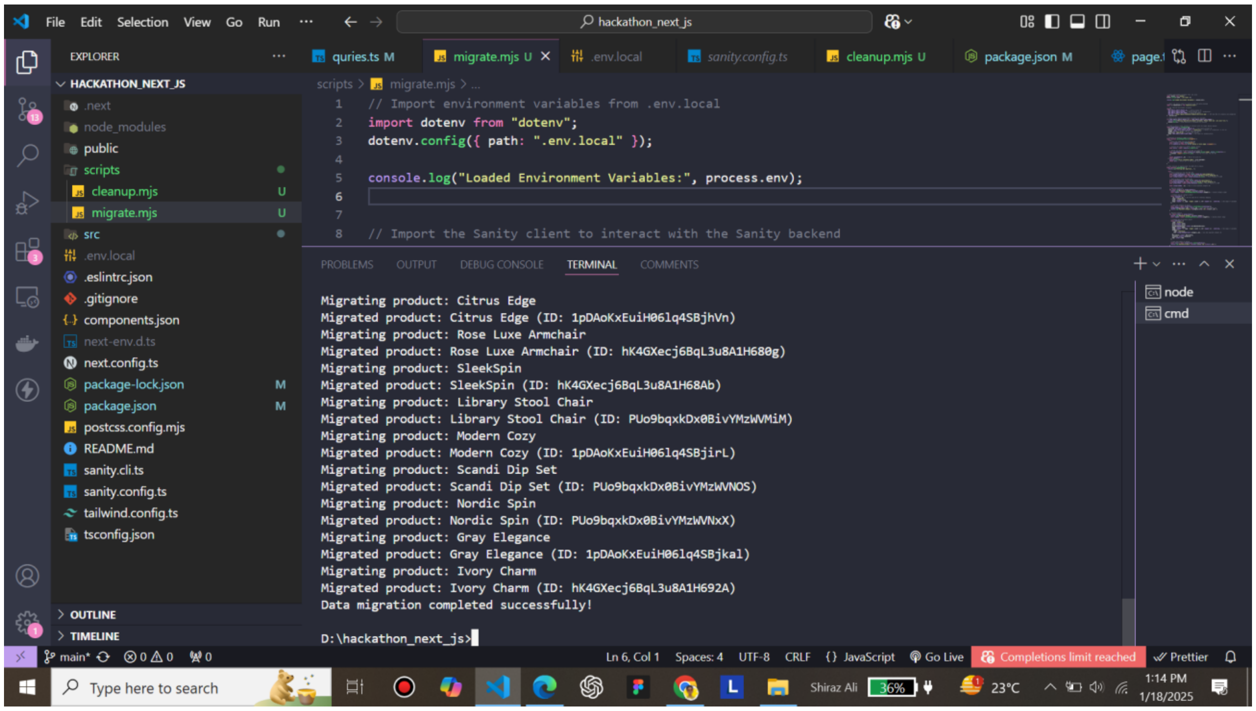
5. Frontend Integration

- The Next.js frontend dynamically consumed data from the Sanity backend via GROQ queries.

4. Screenshot References

The following screenshots were provided to illustrate the process and results:

1. **Screenshot of Data migration successful**:



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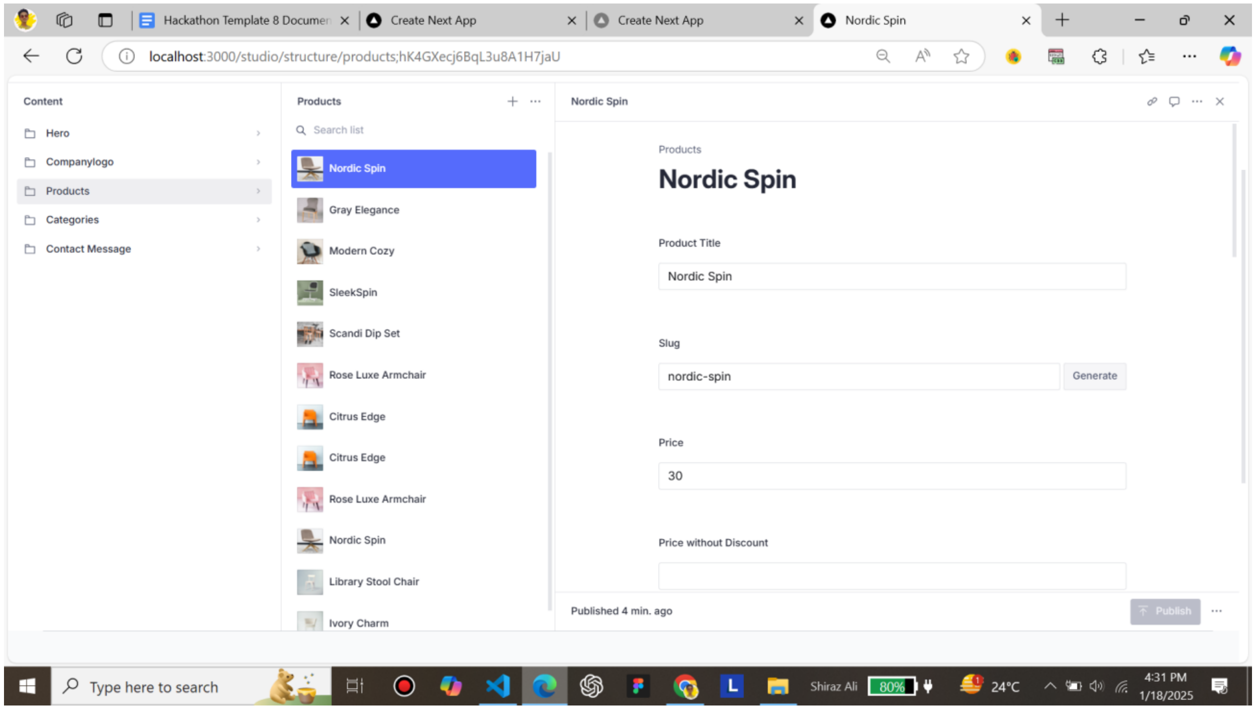
Migrated product: Ivory Charm (ID: hK4GXecj6BqL3u8A1H692A)
Data migration completed successfully!

D:\hackathon_next_js>
```

2. **Sanity Studio - Product View**:



localhost:3000/studio/structure/products;hK4GXecj6BqL3u8A1H7jaU

Content: Hero, Companylogo, Products, Categories, Contact Message

Products: Nordic Spin, Gray Elegance, Modern Cozy, SleekSpin, Scandi Dip Set, Rose Luxe Armchair, Citrus Edge, Citrus Edge, Rose Luxe Armchair, Nordic Spin, Library Stool Chair, Ivory Charm

Products
Nordic Spin

Product Title: Nordic Spin

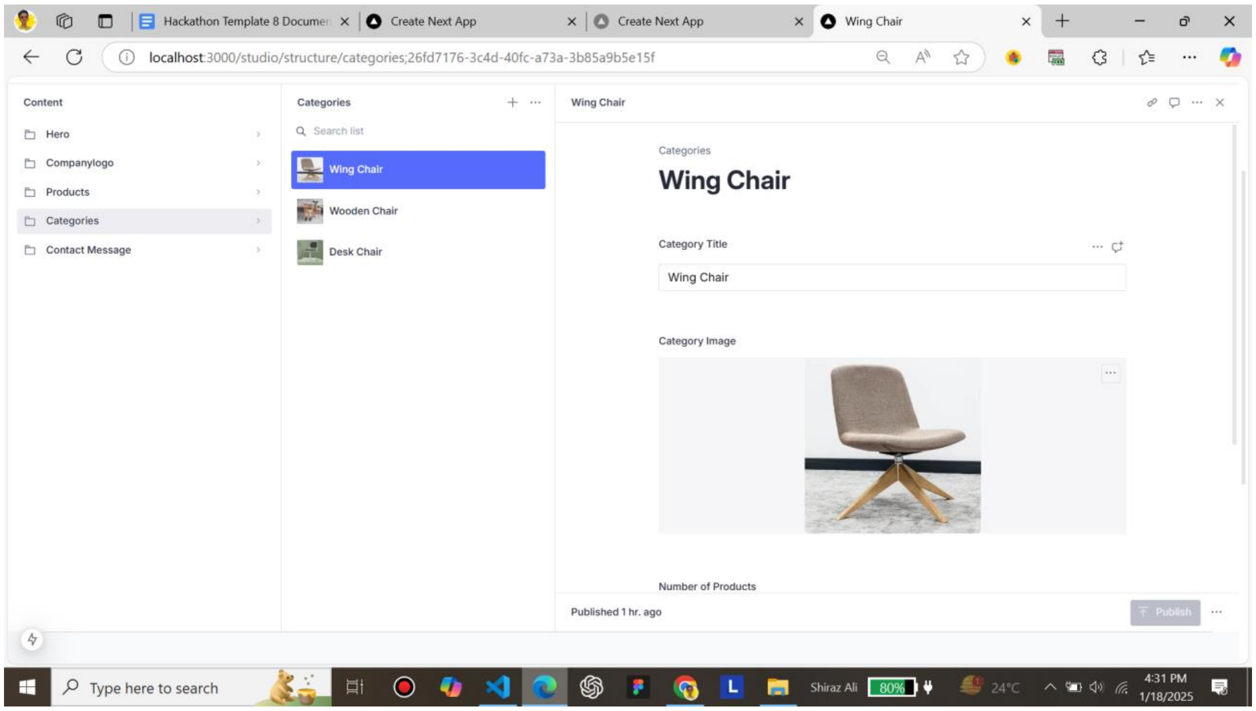
Slug: nordic-spin

Price: 30

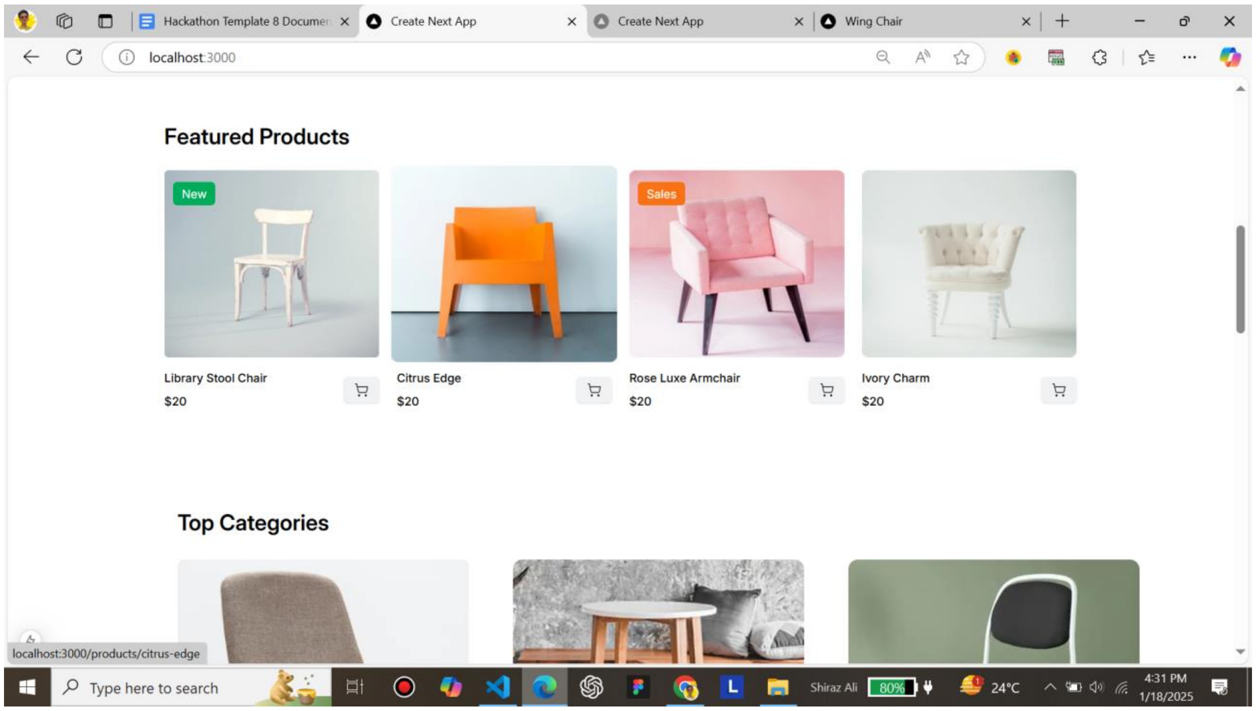
Price without Discount:

Published 4 min. ago

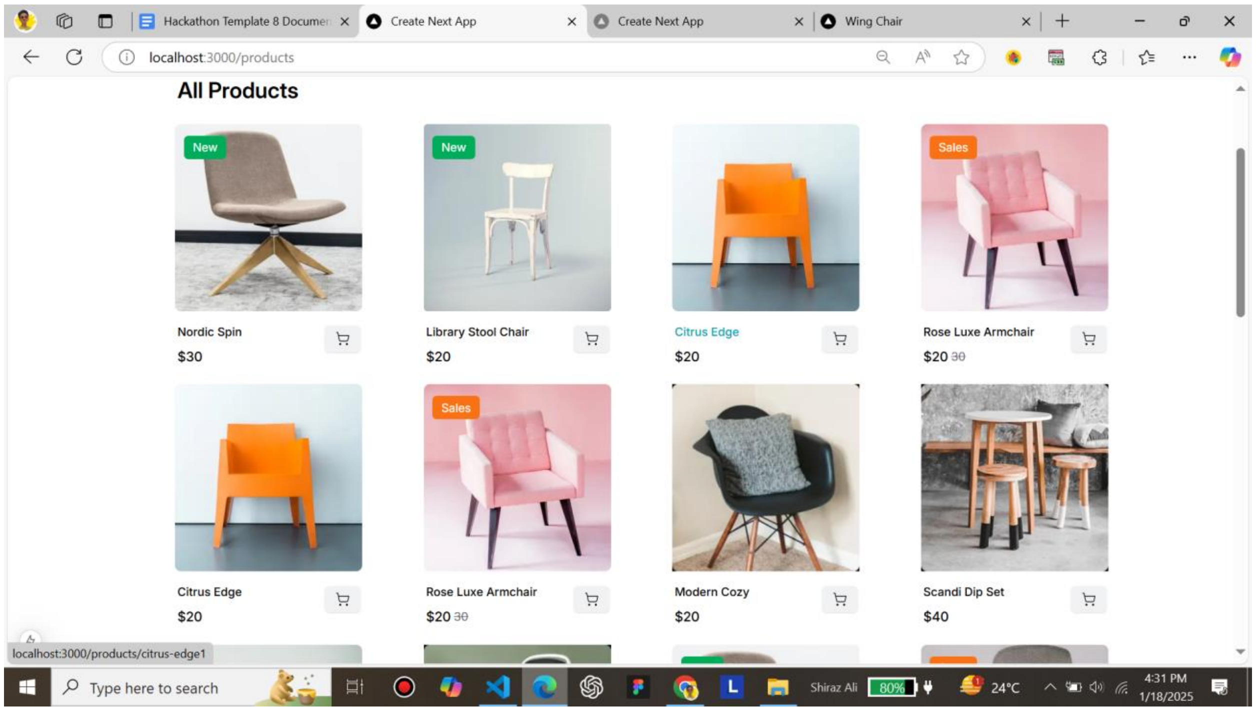
3. **Sanity Studio - Category View**:



4. **Frontend - Featured Products Section**:



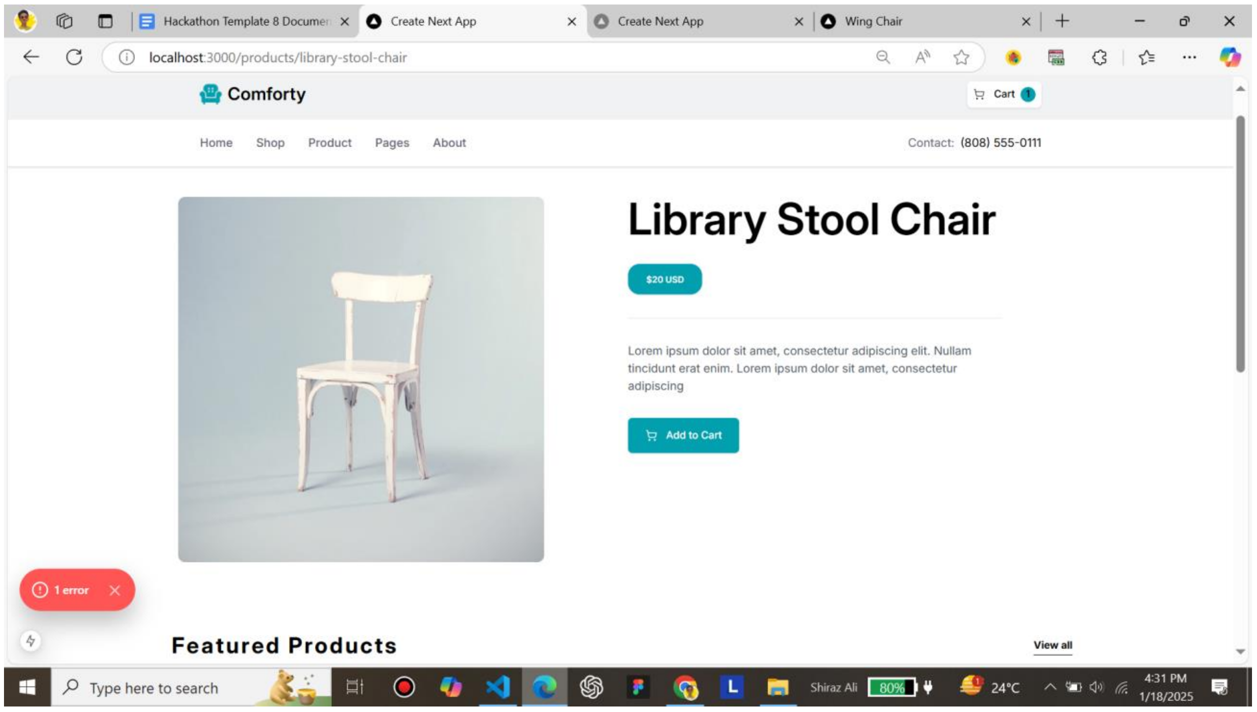
5. **Frontend - All Products Page**:



All Products

New	New		Sales
Nordic Spin $30	Library Stool Chair $20	Citrus Edge $20	Rose Luxe Armchair $20 ~~30~~
	Sales		
Citrus Edge $20	Rose Luxe Armchair $20 ~~30~~	Modern Cozy $20	Scandi Dip Set $40

6. **Frontend - Product Details Page**:



Library Stool Chair

$20 USD

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Conclusion

Day 3 was a successful step toward building a scalable and dynamic marketplace. The seamless integration of APIs, automated data migration, and frontend rendering resulted in a robust and visually appealing system. This task not only enhanced technical expertise but also showcased the power of combining Sanity CMS with Next.js.
