

## Day 3 Hackathon - API Integration and Data Migration

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### Introduction:

This report highlights the complete **API integration** and **data migration** process for a Next.js project using **Sanity CMS**. The following key areas are covered:

- API integration and data fetching methods
  - Schema adjustments
  - Migration techniques
  - Screenshots of completed tasks
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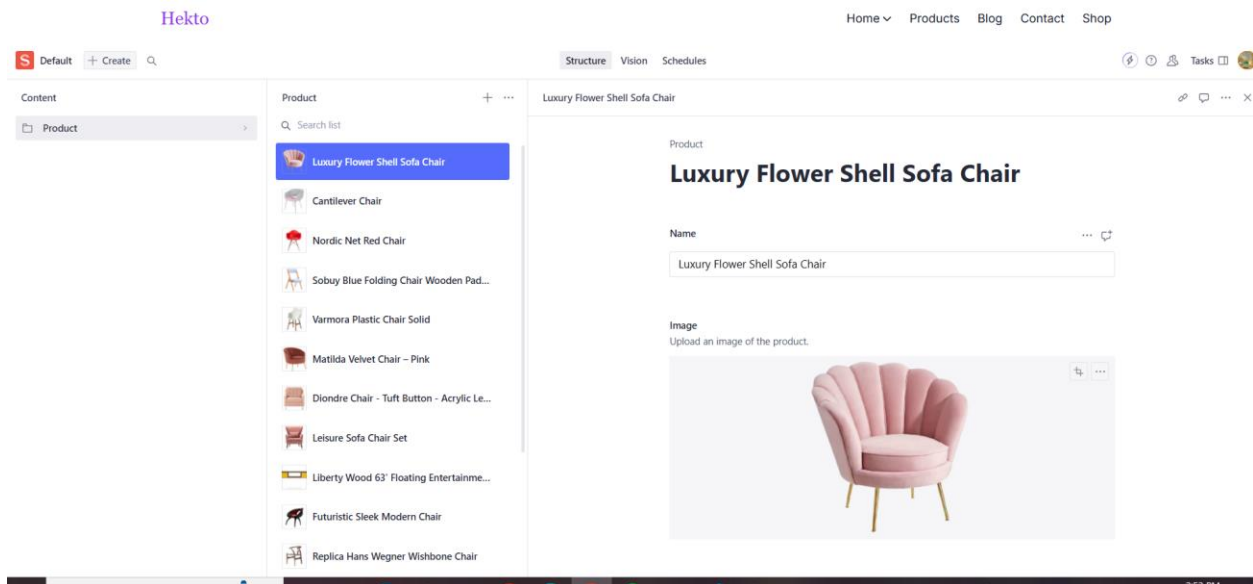
### API Integration Process:

✓ **API integration** was performed using authorized endpoints. A **script** was written to fetch, process, and display data in the Next.js frontend.

✓ **Utility functions** were developed for API communication, managing responses, and handling errors.

✓ API responses were verified via **Postman**, and the frontend dynamically updated.

✓ Validation was conducted to ensure data structure alignment with **Sanity CMS**.



### ★ Code Implementation:

```
import { client } from './client';

// Function to fetch all products
export async function getProducts() {
  const query = `*[_type == "product"]{
    _id, // Ensure we fetch _id for dynamic routing
    name,
    "image": image.asset->url,
    price,
    description,
    inStock,
    category,
  }`;

  const products = await client.fetch(query);
  return products;
}

// Function to fetch a single product by ID
export async function getProductById(id:any) {
  const query = `*[_type == "product" && _id == $id][0]{
    _id,
    name,
```

### Adjustments Made to Schemas:

- ◆ Schema modifications ensured compliance with the API data structure.
- ◆ Field names were mapped correctly for seamless integration.
- ◆ **Validation rules** were added for key fields like **'name'**, **'price'**, and **'image'**.
- ◆ The **product schema** was updated with additional API-driven fields.

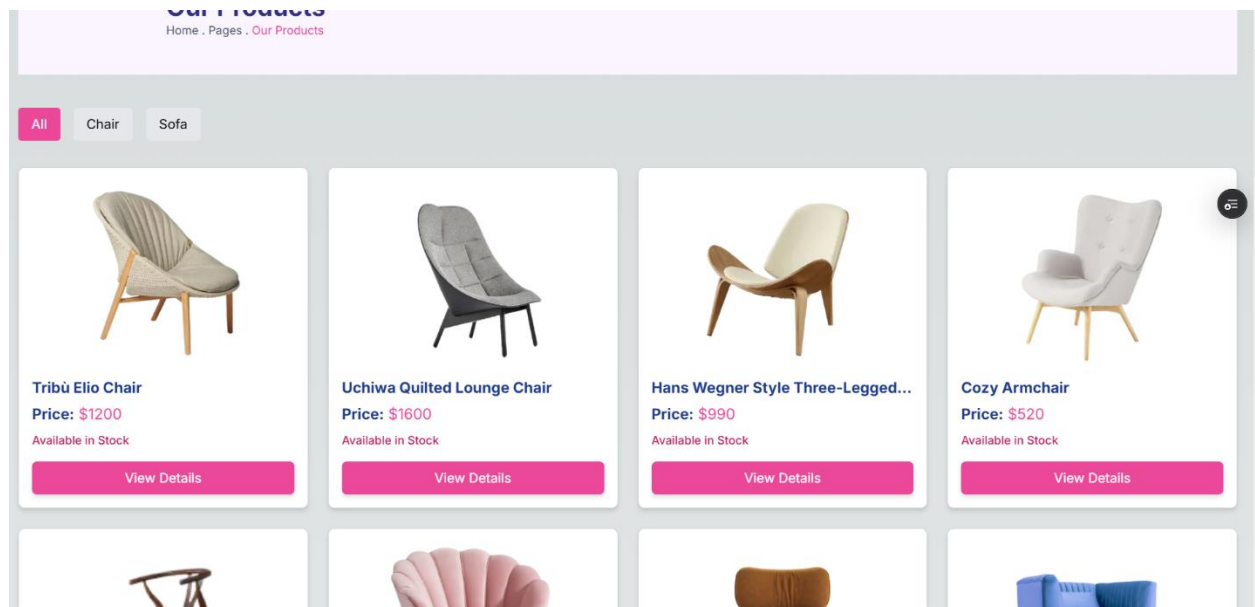
### ★ Schema Code Example:

```

const productSchema = {
  name: 'product',
  type: 'document',
  title: 'Product',
  fields: [
    {
      name: 'name',
      type: 'string',
      title: 'Name',
      validation: (Rule: any) => Rule.required().error('Name is required'),
    },
    {
      name: 'image',
      type: 'image',
      title: 'Image',
      options: {
        hotspot: true,
      },
      description: 'Upload an image of the product.',
    },
    {
      name: 'price',
      type: 'string',
    },
  ],
}

```

Description: This screenshot confirms that the product data has been successfully uploaded to the Sanity CMS



This screenshot shows the final display on the website, where all the integrated products appear

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