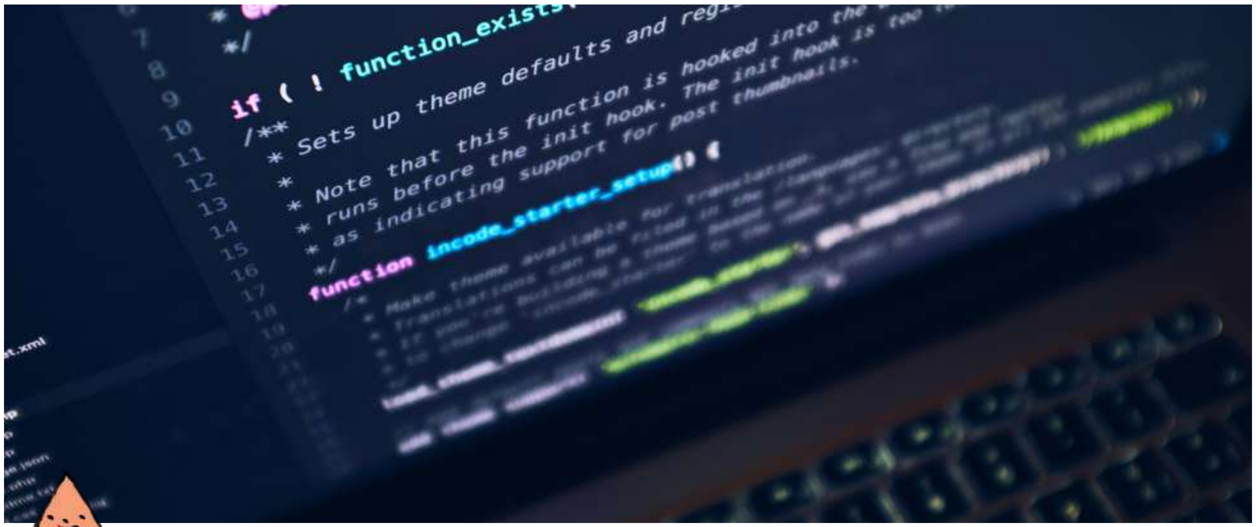


Day 3 - API INTEGRATION AND DATA MIGRATION HEKTO ECOMMERCE

TEMPLATE 4

MAZZ ATHER

ROLL N0: 476344

I created my own API and migrated data to Sanity using Next.js

In this ecommerce website, I implemented a solution that migrates and imports data from my Mocki API into Sanity CMS using Next.js. This process involves fetching data in a Next.js application, transforming it as needed, and sending it to Sanity through its API.

> Below is a step-by-step explanation of how I achieved this.

1 . Fetching Data from My Mocki API

The first step in the process was fetching data from my Mocki API. In my Next.js application, I used the GET method to fetch all the responses and checked the results in the console.

```
async function importData() {
try {
    console.log('Fetching products from API...');
    const response = await axios.get('https://mocki.io/v1/8df2c
    const products = response.data;
    console.log(`Fetched ${products.length} products`);
```

2. Comparing the API Data with Sanity Schema

Once the data was fetched, the next task was to compare the structure of the API data with the Sanity CMS schema. The Sanity schema defines the structure of the content that will be stored in the CMS. In this case, a product schema was defined to handle the product data, which included fields such as

💡 My Api Look Like This

```
[
  {
    "id": 1,
    "productName": "Ergonomic Concrete Chair",
    "productDescription": "The Ergonomic Concrete Chair is de
signed for comfort and durability.",
    "price": "199.99",
    "prevPrice": "249.99",
    "stock": 45,
    "productImage": "https://res.cloudinary.com/dwd9h8qgy/ima
ge/upload/v1736416576/image_32_1_dy4j9j.png",
    "tag": "Featured Products",
    "shipmentArray": [
      {
        "trackingId": "123e4567-e89b-12d3-a456-426614174000",
        "deliveryStatus": "Shipped",
        "estimatedDeliveryDate": "2023-11-15"
      }
    ]
  },
```

```
export default {
  name: 'products',
  title: 'Products',
  type: 'document',
  fields: [
    {
      name: 'id',
      title: 'ID',
      type: 'number'
    },
    {
      name: 'productName',
      title: 'Product Name',
      type: 'string'
    },
    {
      name: 'productDescription',
      title: 'Product Description',
      type: 'text'
    },
    {
      name: 'price',
      title: 'Price',
      type: 'string'
    },
    {
      name: 'prevPrice',
      title: 'Previous Price',
      type: 'string'
    },
    {
      name: 'stock',
      title: 'Stock',
      type: 'number'
    },
    {
      name: 'productImage',
      title: 'Product Image',
      type: 'image',
      options: {
        hotspot: true
      }
    },
    {
      name: 'tag',
      title: 'Tag',
      type: 'string',
      options: {
        list: [
          { title: 'Featured Products', value: 'Featured Produc
          { title: 'Trending Products', value: 'Trending Produc
          { title: 'Latest Products', value: 'Latest Products' 
          { title: 'Top Categories', value: 'Top Categories' }
        ]
      }
    },
    {
      name: 'shipmentArray',
      title: 'Shipment Array',
      type: 'array',
      of: [{ type: 'shipment' }],
    }
```

```
  ]
};
```

I compared the data structure between the API and Sanity schema to ensure alignment. This verification step confirmed that each API data field had a matching field in the Sanity schema structure.

3. Creating and Implementing a Comprehensive Data Migration Script

After confirming the schema and API data structure, the next step was to write a migration script that would automate the process of importing the fetched data into Sanity. A script was created that would:

1. Fetch data from the API.
2. Format the data according to the Sanity schema.
3. Use the Sanity Client to push the data into Sanity.
   The migration script was created as follows:

```
import { createClient } from '@sanity/client';
import axios from 'axios';
import dotenv from 'dotenv';
import { fileURLToPath } from 'url';
import path from 'path';

// Load environment variables from .env.local
const __filename = fileURLToPath(import.meta.url);
const __dirname = path.dirname(__filename);
dotenv.config({ path: path.resolve(__dirname, '../.env.local')

// Create Sanity client
const client = createClient({
  projectId: process.env.NEXT_PUBLIC_SANITY_PROJECT_ID,
  dataset: process.env.NEXT_PUBLIC_SANITY_DATASET,
  useCdn: false,
  token: process.env.SANITY_API_TOKEN,
  apiVersion: '2021-08-31',
});

async function uploadImageToSanity(imageUrl) {
  try {
    console.log(`Uploading image: ${imageUrl}`);
    const response = await axios.get(imageUrl, { responseType:
    const buffer = Buffer.from(response.data);
    const asset = await client.assets.upload('image', buffer, {
      filename: imageUrl.split('/').pop(),
    });
    console.log(`Image uploaded successfully: ${asset._id}`);
    return asset._id;
  } catch (error) {
    console.error('Failed to upload image:', imageUrl, error);
    return null;
  }
}

async function importData() {
  try {
    console.log('Fetching products from API...');
    const response = await axios.get('https://mocki.io/v1/8df2c
    const products = response.data;
    console.log(`Fetched ${products.length} products`);

    for (const product of products) {
      console.log(`Processing product: ${product.productName}`)
      let imageRef = null;
      if (product.productImage) {
        imageRef = await uploadImageToSanity(product.productImag
      }

      const sanityProduct = {
        _type: 'products',
        id: product.id,
        productName: product.productName,
        productDescription: product.productDescription,
        price: product.price,
        prevPrice: product.prevPrice,
        stock: product.stock,
        productImage: imageRef ? {
          _type: 'image',
          asset: {
            _type: 'reference',
            _ref: imageRef,
          },
        } : undefined,
        tag: product.tag,
        shipmentArray: product.shipmentArray.map(shipment => ({
          _type: 'shipment',
          trackingId: shipment.trackingId,
          deliveryStatus: shipment.deliveryStatus,
          estimatedDeliveryDate: shipment.estimatedDeliveryDate
        })),
      };

      console.log('Uploading product to Sanity:', sanityProduct
      const result = await client.create(sanityProduct);
      console.log(`Product uploaded successfully: ${result._id}
    }

    console.log('Data import completed successfully!');
  } catch (error) {
    console.error('Error importing data:', error);
  }
}

importData();
```

4. Setting Up the Environment variables in .env file in root

these environments variable are very important because they store sensitive information securely and keep it separate from the codebase. It enhances security .

```
NEXT_PUBLIC_SANITY_PROJECT_ID=""
NEXT_PUBLIC_SANITY_DATASET=""
SANITY_API_TOKEN=""
```

5.install dotenv and set path

command

npm install dotenv

Installing
dotenv is essential when you need to set and manage environment variables in a project. It enables you to load these variables from a `.env` file into your application's `process.env`.

```
import { createClient } from '@sanity/client';
import dotenv from 'dotenv';
import { fileURLToPath } from 'url';
import path from 'path';

// Load environment variables from .env.local
const __filename = fileURLToPath(import.meta.url);
const __dirname = path.dirname(__filename);
dotenv.config({ path: path.resolve(__dirname, '../.env.local') 

// Create Sanity client
const client = createClient({
  projectId: process.env.NEXT_PUBLIC_SANITY_PROJECT_ID,
  dataset: process.env.NEXT_PUBLIC_SANITY_DATASET,
  useCdn: false,
  token: process.env.SANITY_API_TOKEN,
  apiVersion: '2021-08-31',
});
```

6 . Modifying Package.json

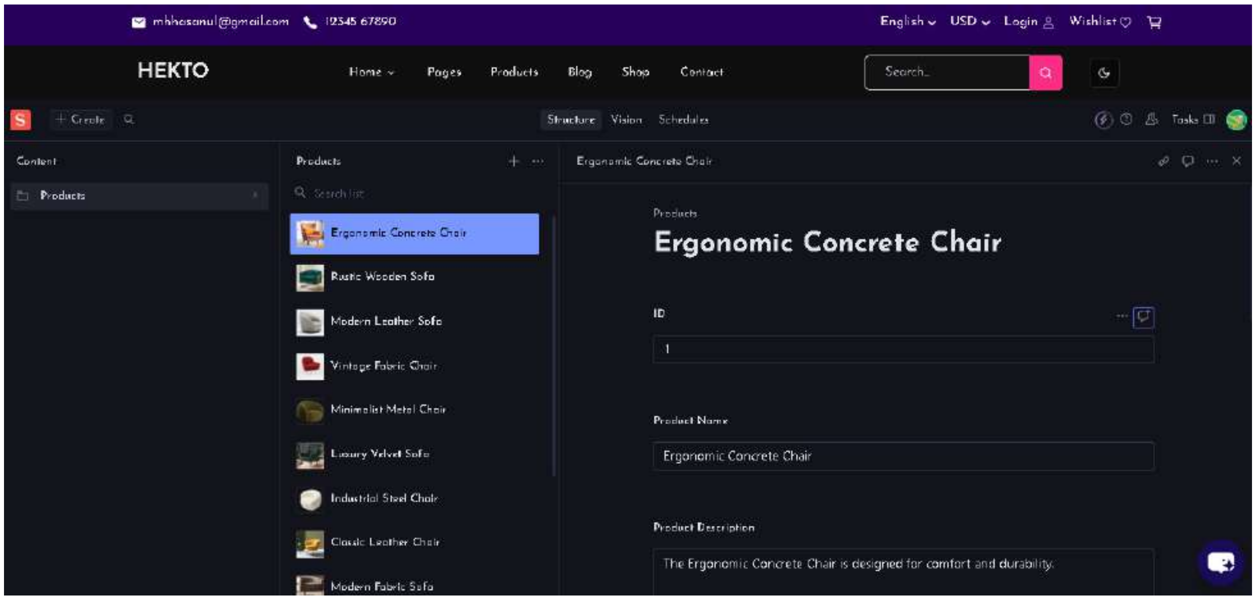
```
    "import-data": "node scripts/importSanityData.mjs"
```

7 . run command to import data to sanity

With everything properly set up, I successfully executed the migration script using the following command:

npm run import-data

As a result, all the data was seamlessly imported into Sanity, one entry at a time.



Ergonomic Concrete Chair
Rustic Wooden Sofa
Modern Leather Sofa
Vintage Fabric Chair
Minimalist Metal Chair
Luxury Velvet Sofa
Industrial Steel Chair
Classic Leather Chair
Modern Fabric Sofa

Ergonomic Concrete Chair

Products

Ergonomic Concrete Chair

ID: 1

Product Name: Ergonomic Concrete Chair

Product Description: The Ergonomic Concrete Chair is designed for comfort and durability.

CONCLUSION

In this process, we successfully automated the seamless migration of data from an external API into Sanity CMS. The key steps involved:

1. Fetching data from API .
2. Mapping and transforming the data to align with the Sanity schema.
3. Writing a migration script to efficiently import the data into Sanity.
4. Configuring the necessary environment and executing the script via `package.json`.
5. run command to import data to sanity CMS

This automation made everything easier and kept the data safe and the same, so the move to Sanity was quick and simple.

Day 3 Checklist

- [x] ~~API Understanding:~~
- [x] ~~Schema Validation~~
- [x] ~~Data Migration~~
- [x] ~~API Integration in Next.js:~~
- [x] ~~Submission Preparation:~~