Day 3 - API Integration And Data Migration

Q-Commerce (Food Tuck)

- **Purpose**:The purpose of data fetching and migration to sanity is to retrieve, integrate and manage data from various sources, and migrate it to a scalable and flexible cloud-based data platform for improved data accuracy ,efficiency and collaboration.
- **Goals**: The goal behind the process is to centralize , organize and optimize data for better decision making , improved collaboration, and enhance business outcomes.

Tools and Prerequisites :

API : 'https://sanity-nextjs-rouge.vercel.app/api/foods'

'https://sanity-nextjs-rouge.vercel.app/api/foods'

Sanity CMS : The headless content management system that allows developers to manage and deliver content across multiple channels.

Frontend Framework : Nextjs

Libraries used : Axios

Steps For Day 3 :

Understand the Provided API :

For Food :

'https://sanity-nextjs-rouge.vercel.app/api/foods'

This API provided us all data related to food items including fields like : name , description, category, image , price etc..

For Chef :

'https://sanity-nextjs-rouge.vercel.app/api/foods'

This API provided us all data related to our chefs including fields like : name , position , experience , speciality etc...

API Integration Process

1.Overview : The API Integration process involves the interaction between the external or provided API and sanity CMS.

- **Identify Key Endpoints :**
  1. For Food :
     - **Endpoint /foods**

'https://sanity-nextjs-rouge.vercel.app/api/foods'

  2. For Chef :
     - **Endpoint/chefs**

'https://sanity-nextjs-rouge.vercel.app/api/chefs'

- **Environment Setup :**

1. Created .env.local file to secure environment variables .
2. Key variables include :
   - ➢ NEXT_PUBLIC_PROJECTID
   - ➢ NEXT_PUBLIC_DATASET
   - ➢ SANITY_API_TOKEN

➔

Adjustments made to schemas :

- ➔ Reorganized the schema to improve data structure and relationships,making it easier to query and analyze data .
- ➔ Added or removed fields to match the target system schema,ensuring that only relevant data is integrated.

Food Api Call

```
export default {
    name: 'chef',
    type: 'document',
    title: 'Chef',
    fields: [
      {
        name: 'name',
        type: 'string',
        title: 'Chef Name',
      },
      {
        name: 'position',
        type: 'string',
        title: 'Position',
        description: 'Role or title of the chef (e.g., Head Chef, Sous Chef)',
      },
      {
        name: 'experience',
        type: 'number',
        title: 'Years of Experience',
        description: 'Number of years the chef has worked in the culinary field',
      },
      {
        name: 'speciality',
        type: 'string',
        title: 'Speciality',
        description: 'Specialization of the chef (e.g., Italian Cuisine, Pastry)',
      },
      {
        name: 'image',
        type: 'image',
        title: 'Chef Image',
```

```
export default {
  name: 'food',
  type: 'document',
  title: 'Food',
  fields: [
    {
      name: 'name',
      type: 'string',
      title: 'Burger',
    },
    {
      name:'slug',
      type:'slug',
      title:'slug',
      options:{
        source:'name'
      }
    },
    {
      name: 'category',
      type: 'string',
      title: 'Category',
      description:
        'Category of the food item (e.g., Burger, Sandwich, Drink, etc.)',
    },
    {
      name: 'price',
      type: 'number',
      title: '$150',
    },
```

Chef API Call

Migration Steps :

- **Environment Setup:**

1. Installed the packages like @sanityclient axios dotenv .

2. Created a script to import data from an external API into sanity.
   (scripts/importData.mjs)

```
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
console.log("Project ID:", process.env.SANITY_PROJECT_ID || "your-default-project-id");
const client = createClient({
  projectId:"mz07uwv1",
  dataset:"production",
  useCdn:true,
```

- **Migration script :**

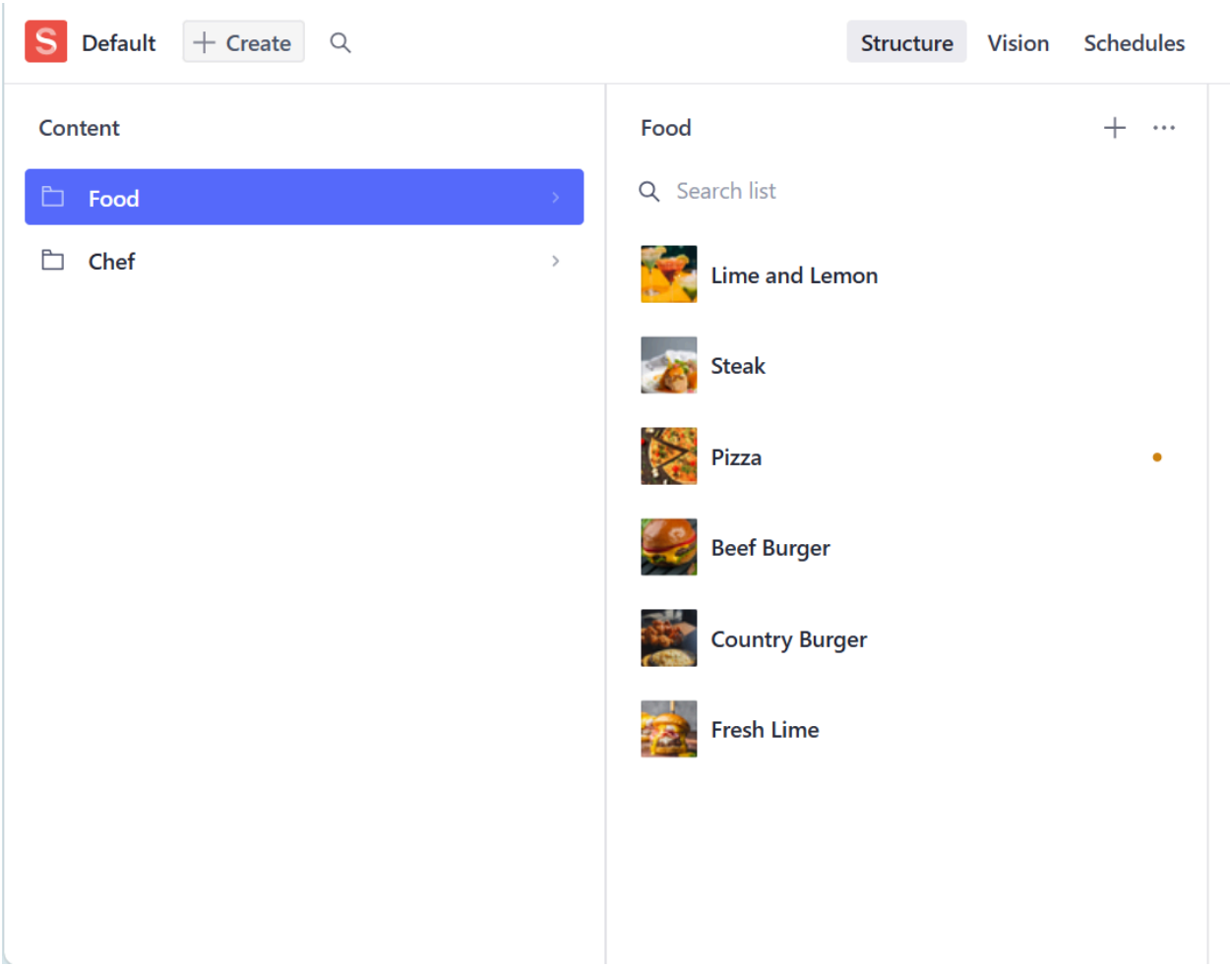
```
async function uploadImageToSanity(imageUrl) {
  try {
    console.log(`Uploading image: ${imageUrl}`);
    const response = await axios.get(imageUrl, { responseType: 'arraybuffer' });
    const buffer = Buffer.from(response.data);
    const asset = await client.assets.upload('image', buffer, {
      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 food, chef data from API...');

    // API endpoint containing  data
    const $Promise = [];
    $Promise.push(
      axios.get('https://sanity-nextjs-rouge.vercel.app/api/foods')
    );
    $Promise.push(
      axios.get('https://sanity-nextjs-rouge.vercel.app/api/chefs')
    );
```

ScreenShots :

- Data displayed on the frontend 👍:



Food Data

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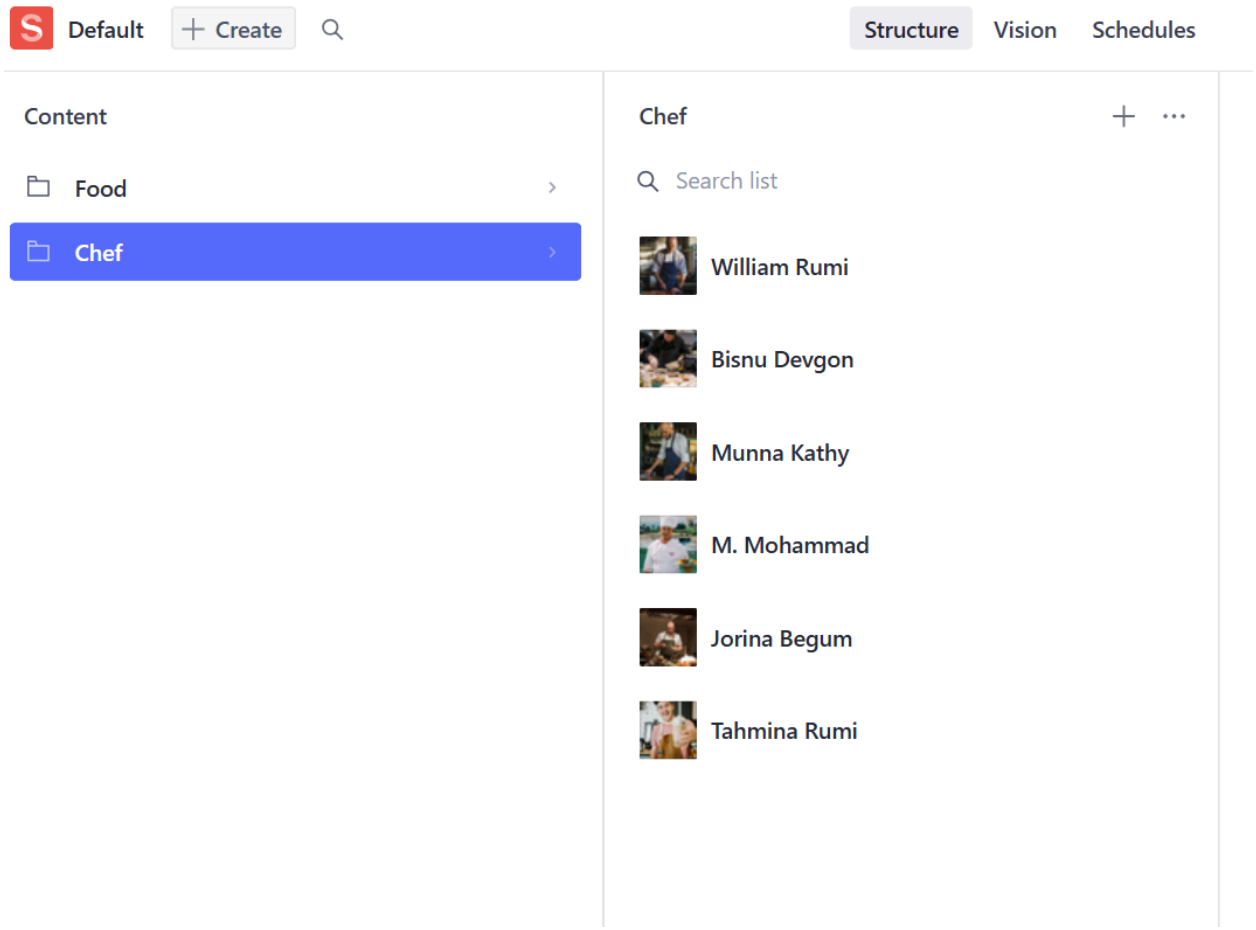

Chef Data

Conclusion :

In conclusion , the process of data fetching , migration and API integration was successfully completed here.This process has enabled the creation of robust data infrastructure , supporting business and future growth . It has driven business success and improved operational efficiency.

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