Day 3: API Integration report (Furniture)

API Integration Process:

Overview

The integration connects an external API providing foods and chefs data to a Sanity CMS project.

Steps Taken

1. Environment Setup

- Utilized `dotenv` to load environment variables from `.env.local`.
- Key environment variables included:
  - `NEXT_PUBLIC_SANITY_PROJECT_ID`
  - `NEXT_PUBLIC_SANITY_DATASET`
  - `SANITY_TOKEN`

2. Sanity Client Creation

- Used `@sanity/client` to establish a connection to the Sanity project.
- Configured the client with the following details:
  - Project ID
  - Dataset
  - API version
  - Authentication token

3. Data Fetching

- Made concurrent API calls using `axios` to fetch food and chef data.
- Accessed the following endpoints:
  - `https://sanity-nextjs-rouge.vercel.app/api/foods`
  - `https://sanity-nextjs-rouge.vercel.app/api/chefs`

4. Data Processing

- Iterated through the fetched data.
- Uploaded images to Sanity's asset library using the `client.assets.upload()` method.

5. Sanity Document Creation

- Transformed fetched data into Sanity-compatible document structures.
- Uploaded each document using `client.create()`.

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Error Handling

- Implemented `try-catch` blocks for API calls and Sanity operations.
- Logged errors for debugging purposes.

Adjustments made to schemas:

```
src > sanity > schemaTypes > product.ts > [∞] product > fields
   3   export const product = defineType({
   4       name: "product",
   5       title: "Product",
   6       type: "document",
   7       fields: [
   8           {
   9               name: "title",
  10               title: "Title",
  11               validation: (rule) => rule.required(),
  12               type: "string"
  13           },
  14           {
  15               name:"description",
  16               type:"text",
  17               validation: (rule) => rule.required(),
  18               title:"Description",
  19           },
  20           {
  21               name: "productImage",
  22               type: "image",
  23               validation: (rule) => rule.required(),
  24               title: "Product Image"
  25           },
  26           {
  27               name: "price",
  28               type: "number",
  29               validation: (rule) => rule.required(),
  30               title: "Price",
  31           },
  32           {
  33               name: "tags",
  34               type: "array",
  35               title: "Tags",
  36               of: [{ type: "string" }]
  37           },
  38           {
  39               name:"dicountPercentage",
  40               type:"number",
  41               title:"Discount Percentage",
  42           },
  43           {
  44               name:"isNew",
  45               type:"boolean",
  46               title:"New Badge",
  47           }
  48       ]
  49   })
```

Migration Steps and Tools Used:

Migration Steps

1. **Backup Data**
   - o Take a backup of your existing dataset using the Sanity CLI or dashboard. This ensures you can restore your data if anything goes wrong.
2. **Update Schema**
   - o Make the necessary changes to your schema, such as adding new fields, modifying existing ones, or updating validation rules.
3. **Deploy Updated Schema**
   - o Deploy the updated schema to your Sanity Studio so the new structure is available in your environment.
4. **Inspect Data**
   - o Check the existing data to ensure it aligns with the updated schema, especially for required fields or validation rules.
5. **Migrate Data**
   - o If the updated schema introduces new required fields, manually or programmatically assign default values to the affected documents.
6. **Test Locally**
   - o Run Sanity Studio locally and verify that the changes work as expected without breaking any functionality.
7. **Validate Data**
   - o Validate all documents to ensure compliance with the new schema rules. Identify and fix any missing or invalid data.
8. **Deploy to Production**
   - o Push the changes to the production environment and monitor to confirm everything works seamlessly.

Tools Used

1. **Sanity CLI**
   - o For exporting and importing datasets and deploying schema updates.
2. **Sanity Studio**
   - o To update and test schema changes locally before deploying to production.
3. **Sanity Dashboard**
   - o To monitor and manage the live dataset and environment.
4. **GROQ Queries**
   - o For querying and inspecting existing documents to find missing or invalid data.
5. **Custom Scripts (Optional)**
   - o For large-scale migrations, use JavaScript and the Sanity Client to automate updates to multiple documents.

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Screenshots of:

API calls (Products):

```
Product Rustic Vase Set uploaded successfully: {
  _createdAt: '2025-01-18T00:10:01Z',
  _id: 'jGHNK2T7WRTGSZ6CroDsVW',
  _rev: 'jGHNK2T7WRTGSZ6CroDsTp',
  _type: 'product',
  _updatedAt: '2025-01-18T00:10:01Z',
  description: 'Bring the charm of nature into your home with the Rustic Vase Set. Perfect for those who appreciate timeless beauty and a warm, inviting atmosphere, this set of vases adds a touch of rustic elegance to any
space. Crafted with care and attention to detail, these vases are designed to evoke the essence of vintage craftsmanship while seamlessly complementing both modern and traditional decor styles.\n' +
  '\n' +
  'The Rustic Vase Set features a collection of three uniquely designed vases, each with its own character. Their earthy tones, textured finishes, and artisanal touch capture the essence of the countryside, making them i
deal for showcasing fresh flowers, dried arrangements, or simply as stand-alone decor pieces. Whether placed on a mantel, coffee table, or dining area, these vases effortlessly enhance the ambiance of your home.\n' +
  '\n' +
  'Made from high-quality materials, the Rustic Vase Set offers both style and durability. The natural, imperfect surfaces of the vases give them a distinct, hand-crafted appeal, ensuring that each set is one-of-a-kind.
With their timeless design, these vases make a perfect gift for housewarmings, weddings, or any special occasion.\n' +
  '\n' +
  'Key Features:\n' +
  '\n' +
  'Set includes three uniquely designed rustic vases\n' +
  'Crafted from high-quality materials with a natural, hand-crafted finish\n' +
  'Perfect for displaying flowers, greenery, or as standalone decorative pieces\n' +
  'Versatile design complements both modern and traditional interiors\n' +
  'Ideal for gifting or personal use in any living space\n' +
  'Add warmth and character to your home with the Rustic Vase Set-where classic design meets natural beauty.',
  dicountPercentage: 10,
  isNew: false,
  price: 210,
  productImage: {
    _type: 'image',
    asset: {
      _ref: 'image-2219cafc285ec13a2ed3f88aa36cbea852a11735-305x375-png'
    }
  },
  tags: [ 'rustic ', 'vase ', 'home decor', 'vintage ', 'interior design' ],
  title: 'Rustic Vase Set'
}
Uploading image: https://cdn.sanity.io/images/7xt4qcah/production/cbfd4d2e1e3a58e25763a1d84efe10a8c25aeed7-3264x4928.jpg
Product Timber Craft uploaded successfully: {a8b80142ff8e96e0f3af21811f5b9f-3264x4928-jpg
  _createdAt: '2025-01-18T00:10:10Z',
  _id: 'jGHNK2T7WRTGSZ6CroDsj4',
  _rev: 'jGHNK2T7WRTGSZ6CroDshN',
  _type: 'product',
  _updatedAt: '2025-01-18T00:10:10Z',
  description: 'Introducing TimberCraft-a collection that celebrates the timeless beauty of wood craftsmanship and the art of nature's finest materials. Inspired by the rustic charm and durability of natural wood, TimberCr
aft brings warmth, character, and a touch of handcrafted elegance to any space. Perfect for those who value authenticity and sustainability, this collection combines the strength and design, making it th
e ideal choice for modern and traditional homes alike.\n' +
  '\n' +
  "Each piece in the TimberCraft collection is meticulously crafted to highlight the unique grains and textures of the wood, bringing an organic, earthy feel to your space. Whether you're looking for furniture, decor, or
accents, TimberCraft offers a variety of beautifully designed pieces that blend rustic appeal with contemporary sophistication. The collection is designed to stand the test of time, with materials chosen for their durabil
```

```
  'Key Features:\n' +
  '\n' +
  'Made from high-quality, sustainable timber for durability and lasting appeal\n' +
  'Rustic yet refined design that complements both modern and traditional interiors\n' +
  'Unique wood grains and textures that bring natural beauty to your space\n' +
  'Expert craftsmanship that highlights the authenticity of each piece\n' +
  'Perfect for creating a cozy, earthy atmosphere in any room\n' +
  'Bring the timeless charm of nature into your home with TimberCraft-where the beauty of wood meets masterful craftsmanship, creating lasting pieces that stand out in both style and substance.',
  dicountPercentage: 30,
  isNew: false,
  price: 320,
  productImage: {
    _type: 'image',
    asset: {
      _ref: 'image-35a8072e40a8b80142ff8e96e0f3af21811f5b9f-3264x4928-jpg'
    }
  },
  tags: [
    'wooden ',
    'craftsmanship ',
    'furniture ',
    'modern ',
    'nature inspired'
  ],
  title: 'Timber Craft'
}
Loading image: https://cdn.sanity.io/images/7xt4qcah/production/9fabbaddda1a411013d7c6af7f871295634191a9-5029x3353.jpg
Image uploaded successfully: image-d85aa7d13ed4a7f06e46c153928620b48d89729f-5029x3353-jpg
Product Amber Haven uploaded successfully: {
  _createdAt: '2025-01-18T00:10:16Z',
  _id: 'aWt125CyehY2YfnCtxeeMM',
  _rev: 'aWt125CyehY2YfnCtxeeKC',
  _type: 'product',
  _updatedAt: '2025-01-18T00:10:16Z',
  description: 'Step into a world of warmth and tranquility with Amber Haven-a collection inspired by the golden glow and timeless beauty of amber. This sophisticated line combines the soothing hues of amber with elegant,
contemporary design to create a space that feels both welcoming and luxurious. Ideal for those seeking a serene escape, Amber Haven infuses your home with a sense of calm, warmth, and understated elegance.\n' +
  '\n' +
  "Crafted with high-quality materials and a keen eye for detail, each piece in the Amber Haven collection is designed to evoke feelings of comfort and relaxation. The soft, amber-toned accents, paired with sleek lines a
nd refined craftsmanship, bring a touch of nature's beauty into your home. Whether you're furnishing your living room, bedroom, or dining space, Amber Haven creates an inviting atmosphere that radiates peace and sophistica
tion.\n" +
  '\n' +
  'The collection's warmth and versatility allow it to seamlessly integrate into various décor styles, from modern to traditional, making it a perfect choice for those who love both timeless elegance and contemporary fla
 Amber Haven offers a sanctuary of comfort and luxury, where every piece is designed to enhance your home and your well-being.\n' +
  '\n' +
  'Key Features:\n' +
  '\n' +
  'Warm amber tones and elegant design create a cozy, inviting ambiance\n' +
  'High-quality craftsmanship and materials ensure durability and long-lasting appeal\n' +
  'Versatile style complements a variety of interior designs, from modern to traditional\n' +
  'Perfect for creating a serene and luxurious space in any room\n' +
  'Ideal for those seeking a combination of beauty, comfort, and sophistication\n' +
  'Bring the golden glow of Amber Haven into your home-where warmth, luxury, and timeless design come together to create a peaceful and elegant retreat.',
  dicountPercentage: 0,
  isNew: true,
  price: 150,
```

BY RADIYA KHAN

Data successfully displayed in the frontend:
Food data:

Bold Nest

Welcome to BoldNest—where fearle...

Rs. 260

Cloud Haven Chair

Sink into comfort with the Cloud...

Rs. 230

Vase Set

Elevate your home decor with the...

Rs. 150

NEW

Bed

Introducing the Bed—your sanctuar...

Rs. 250

Wood Chair

Introducing the Wood Chair—a...

Rs. 100

Retro Vibe

Introducing RetroVibe—a perfect...

Rs. 340

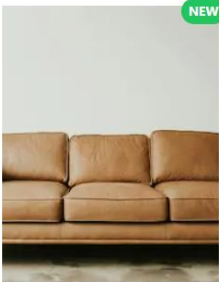**The Lucky Lamp**

Introducing The Lucky Lamp—a...

Rs. 200

NEW

Zen Table

Introduce tranquility and balance int...

Rs. 250

Rustic Vase Set

Bring the charm of nature into your...

Rs. 210

Timber Craft

Introducing TimberCraft—a collectio...

Rs. 320

NEW

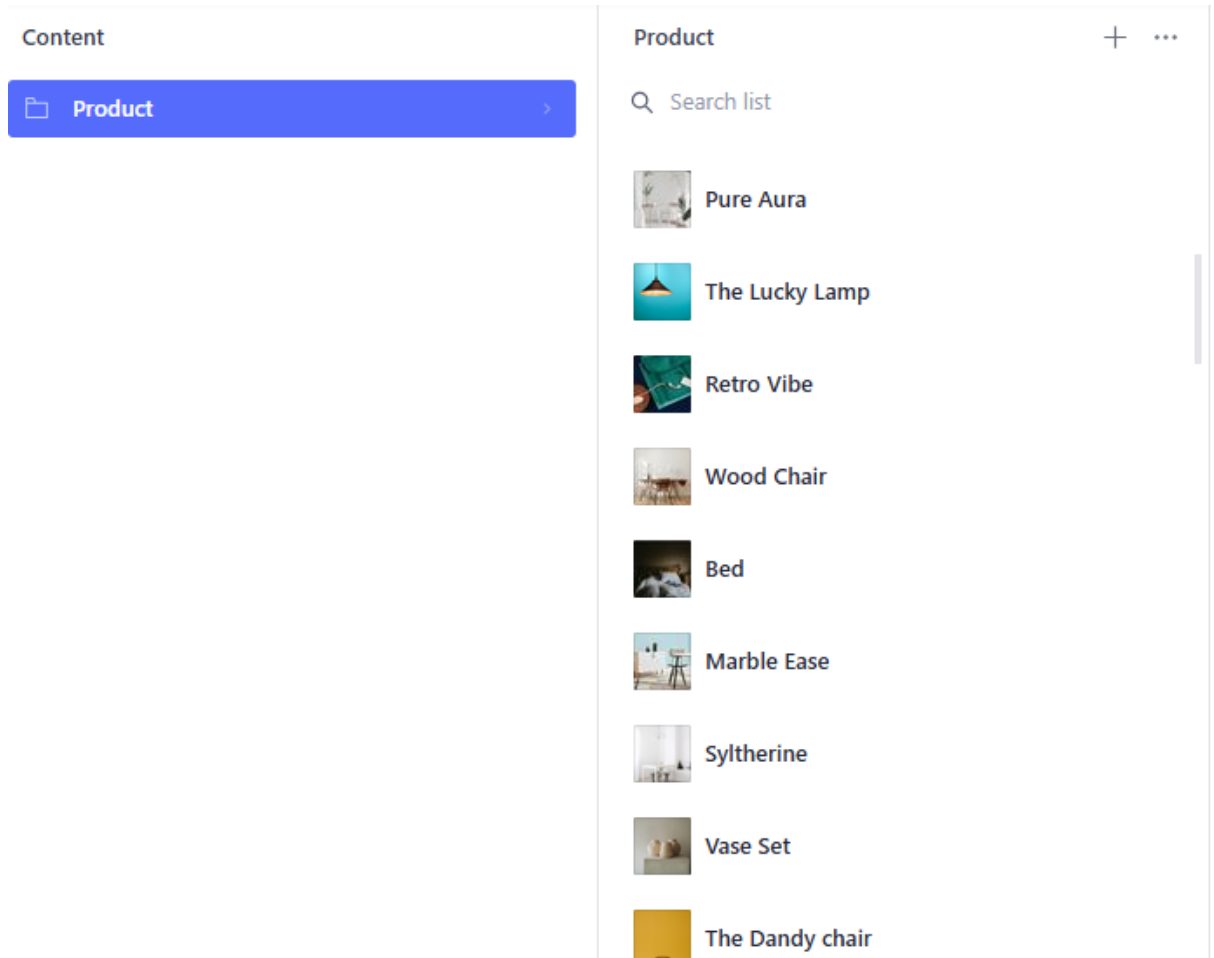**Amber Haven**

Step into a world of warmth and...

Rs. 150

NEW

The Dandy chair

Meet The Dandy Chair—the epitom...

Rs. 150

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Populated sanity CMS fields:
Products :

Code Snippents for API integration and migration scripts:

```
1   import { createClient } from "@sanity/client";
2   const client = createClient({
3     projectId: "rpor6hos",
4     dataset: "production",
5     useCdn: true,
6     apiVersion: "2025-01-13",
7     token:SANITY_TOKEN,
8   });
9
10  async function uploadImageToSanity(imageUrl) {
11    try {
12      console.log(`Uploading image: ${imageUrl}`);
13
14      const response = await fetch(imageUrl);
15      if (!response.ok) {
16        throw new Error(`Failed to fetch image: ${imageUrl}`);
17      }
18      const buffer = await response.arrayBuffer();
19      const bufferImage = Buffer.from(buffer);
                                                    const bufferImage: Buffer<ArrayBufferLike>
20
21      const asset = await client.assets.upload("image", bufferImage, {
22        filename: imageUrl.split("/").pop(),
23      });
24      console.log(`Image uploaded successfully: ${asset._id}`);
25      return asset._id;
26    } catch (error) {
27      console.error("Failed to upload image:", imageUrl, error);
28      return null;
29    }
30  }
31  async function uploadProduct(product) {
32    try {
33      const imageId = await uploadImageToSanity(product.imageUrl);
34
35      if (imageId) {
36        const document = {
37          _type: "product",
38          title: product.title,
39          price: product.price,
40          productImage: {
41            _type: "image",
42            asset: {
43              _ref: imageId,
44            },
45          },
46          tags: product.tags,
47          dicountPercentage: product.dicountPercentage, // Typo in field name: dicountPercentage -> discountPercentage
```

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