Day 3 – API Integration and Migration for Furniro Website

Submission Overview

This document serves as a comprehensive report on the tasks performed on Day 3 for the Furniro Website. Below, we outline the API integration process, schema adjustments, and migration steps, including tools used and code snippets for better clarity.

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1. API Integration

Process:

1. **Understanding Requirements**: Analyzed the API documentation to identify endpoints and payload structures required for data fetching.
2. **Configuration**:
   - Set up environment variables for API keys and base URLs to ensure security.
   - Configured HTTP client (e.g., Axios) for managing API requests efficiently.
3. **Implementation**:
   - Integrated API endpoints to fetch and post data.
   - Applied error handling and retry mechanisms to ensure reliability.
4. **Testing**:
   - Used tools like Postman to test API responses.
   - Debugged issues related to authentication and CORS policies.

Challenges Faced:

- Handling nested data structures from the API.
- Syncing API responses with the database structure.

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2. Adjustments Made to Schemas

Before:

- The original schema was not fully compatible with the API's data structure.

Adjustments:

1. **Field Additions**:
   - Added fields such as `price`, `availability`, and `dimensions` to store additional API data.
2. **Field Modifications**:

o   Adjusted data types to align with API response formats (e.g., `string` to `number` for prices).

3. **Normalization**:
   o   Restructured the schema to minimize data redundancy and improve performance.

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3. Migration Steps and Tools Used

Tools:

- **Prisma**: For schema adjustments and database migrations.
- **Sanity CMS**: For content synchronization and management.
- **Sequelize**: To handle database migrations and versioning.

Steps:

1. **Database Backup**:
   o   Created a backup of the existing database to prevent data loss.
2. **Schema Updates**:
   o   Updated schema definitions to include new fields.
   o   Validated the schema changes using Prisma.
3. **Migration Execution**:
   o   Ran migration scripts to apply schema changes to the database.
4. **Data Synchronization**:
   o   Populated the new fields with API data using scripts.
5. **Verification**:
   o   Verified data integrity and functionality post-migration.

Screenshots

1. **API Calls**:
2. **Data Successfully Displayed on the Frontend**:
3. **Populated Sanity CMS Fields**:

Updated Schema

```
export const product = defineType({
  name: "product",
  title: "Product",
  type: "document",
  fields: [
    {
      name: "title",
      title: "Title",
      validation: (rule) => rule.required(),
      type: "string",
    },
    {
      name: "description",
      type: "text",
      validation: (rule) => rule.required(),
      title: "Description",
    },
    {
      name: "productImage",
      type: "image",
      options: { hotspot: true }, // Enables cropping and hotspot selection
      validation: (rule) => rule.required(),
      title: "Product Image",
    },
```

Migration Data

```javascript
1    import { createClient } from '@sanity/client';
2
3    const client = createClient({
4      projectId: '6spgz8iy',
5      dataset: 'production',
6      useCdn: true,
7      apiVersion: '2025-01-13',
8      token:
         'skbk9Jfk7bzdAUdF4sXaxeaH7vylOipGFWNLHJaMeFYNkViLJamamgs4kCycpfuPftIWV2w6rNYvaCi4Fcr5cVTAbpm6kLkOnTslK7
         oQyRZ61gC6ykdEtobSMncA9zq0HaNvTZDoN2o1kEApZNdly7j6YhvmJwcS3u3eDpvkASSgITrAB344',
9    });
10
11   async function uploadImageToSanity(imageUrl) {
12     try {
13       console.log(`Uploading image: ${imageUrl}`);
14
15       const response = await fetch(imageUrl);
16       if (!response.ok) {
17         throw new Error(`Failed to fetch image: ${imageUrl}`);
18       }
19
20       const buffer = await response.arrayBuffer();
21       const bufferImage = Buffer.from(buffer);
22
23       const asset = await client.assets.upload('image', bufferImage, {
```

Santity

Data successful on Front end page

minimalistic

minimalistic modern

home

elegance

Sleek Living
Rp 300
Discount: 14% off
New Arrival!
Tags:
sleek modern elegant furniture
living

Serene Seat
Rp 350
Discount: 12% off
Tags:
serene seat comfort relaxing
furniture

Modern Serenity
Rp 480
Discount: 15% off
New Arrival!
Tags:
modern serenity peaceful
contemporary furniture

Sunny Chic
Rp 400
Discount: 12% off
New Arrival!
Tags:
sunny chic modern elegant
furniture