Day 3- API Integration and Data Migration

Introduction

This report documents the API integration process, adjustments made to schemas, migration steps, and tools used during Day 3 of the project. The report also includes screenshots of API calls, data successfully displayed in the frontend, and populated Sanity CMS fields, as well as code snippets for API integration and migration scripts.

API Integration Process

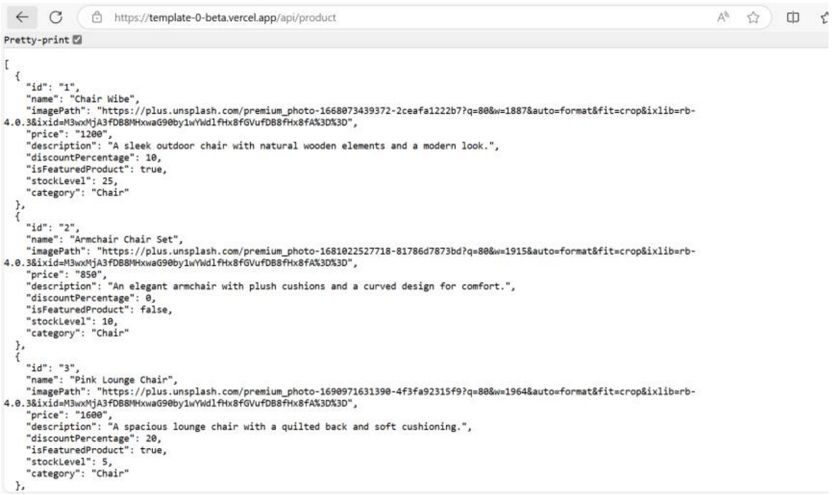
Detail the steps taken to integrate the API, including:

Setting Up the API:

`https://template-0-beta.vercel.app/api/product`.

Purpose of the API:

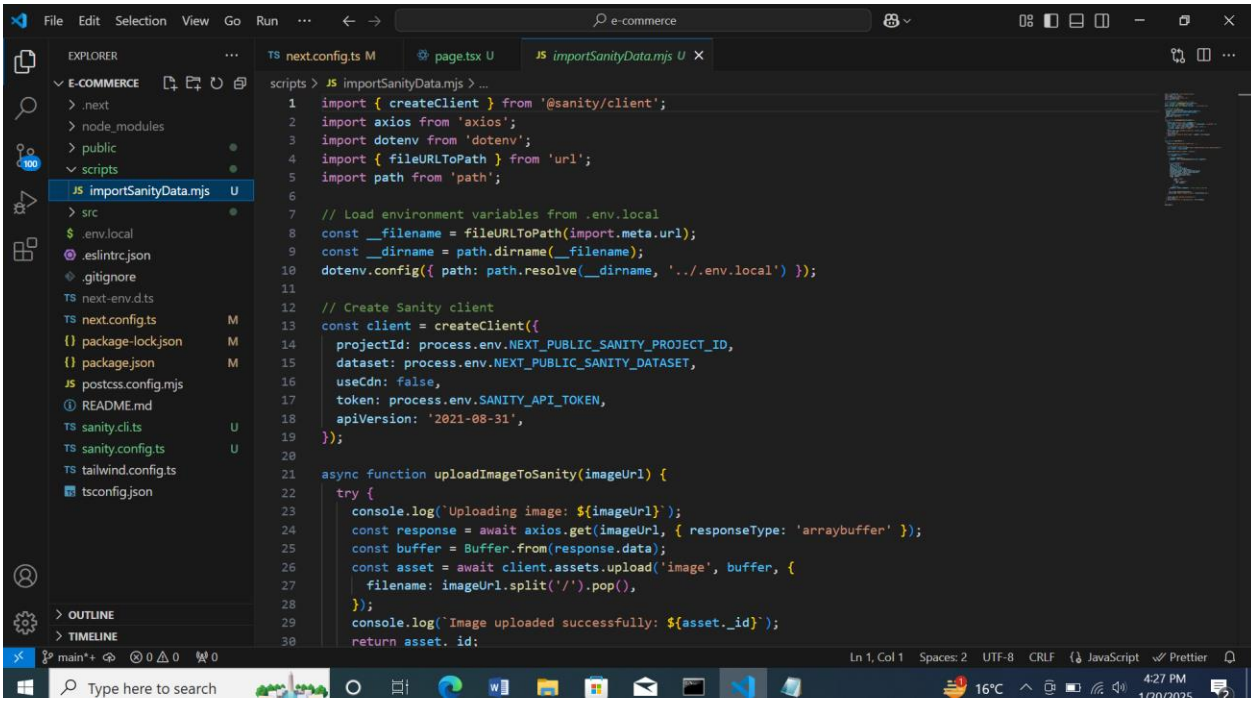
This API endpoint is to provide a list of products with their relevant details for use in an e-commerce application. It acts as a backend resource that exposes product data to be consumed by the frontend, allowing the display of product information such as names, descriptions, prices, stock levels, and images.



```
[
  {
    "id": "1",
    "name": "Chair Wibe",
    "imagePath": "https://plus.unsplash.com/premium_photo-1668073439372-2ceafa1222b7?q=80&w=1887&auto=format&fit=crop&ixlib=rb-
4.0.3&ixid=M3wxMjA3fDB8MHxwaG90by1wYWdlfHx8fGVufDB8fHx8fA%3D%3D",
    "price": "1200",
    "description": "A sleek outdoor chair with natural wooden elements and a modern look.",
    "discountPercentage": 10,
    "isFeaturedProduct": true,
    "stockLevel": 25,
    "category": "Chair"
  },
  {
    "id": "2",
    "name": "Armchair Chair Set",
    "imagePath": "https://plus.unsplash.com/premium_photo-1681022527718-81786d7873bd?q=80&w=1915&auto=format&fit=crop&ixlib=rb-
4.0.3&ixid=M3wxMjA3fDB8MHxwaG90by1wYWdlfHx8fGVufDB8fHx8fA%3D%3D",
    "price": "850",
    "description": "An elegant armchair with plush cushions and a curved design for comfort.",
    "discountPercentage": 0,
    "isFeaturedProduct": false,
    "stockLevel": 10,
    "category": "Chair"
  },
  {
    "id": "3",
    "name": "Pink Lounge Chair",
    "imagePath": "https://plus.unsplash.com/premium_photo-1690971631390-4f3fa92315f9?q=80&w=1964&auto=format&fit=crop&ixlib=rb-
4.0.3&ixid=M3wxMjA3fDB8MHxwaG90by1wYWdlfHx8fGVufDB8fHx8fA%3D%3D",
    "price": "1600",
    "description": "A spacious lounge chair with a quilted back and soft cushioning.",
    "discountPercentage": 20,
    "isFeaturedProduct": true,
    "stockLevel": 5,
    "category": "Chair"
  },
```

<u>Data Import Script</u>

The script used to import data from the API to Sanity:

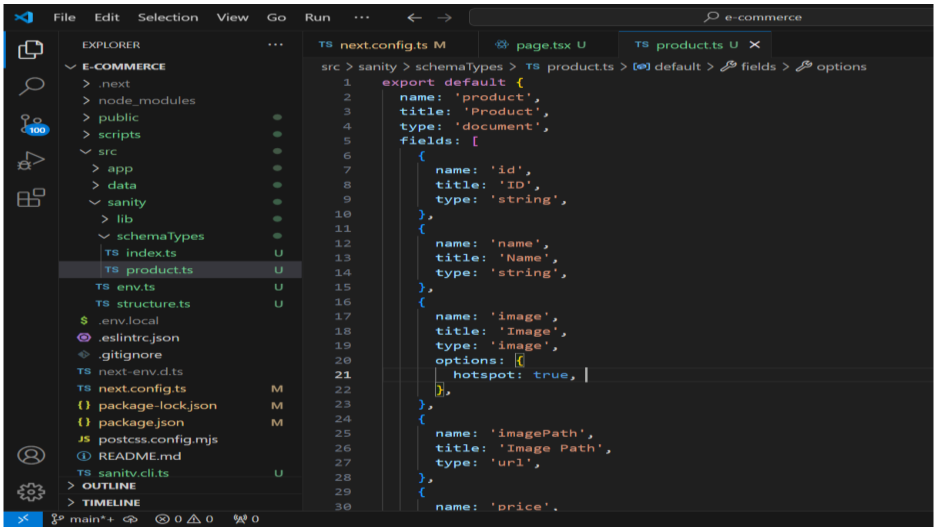


```javascript
import { createClient } from '@sanity/client';
import axios from 'axios';
import dotenv from 'dotenv';
import { fileURLToPath } from 'url';
import path from 'path';

// 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: '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;
```

Adjustments Made to Schemas

Added a new field to store image URLs.

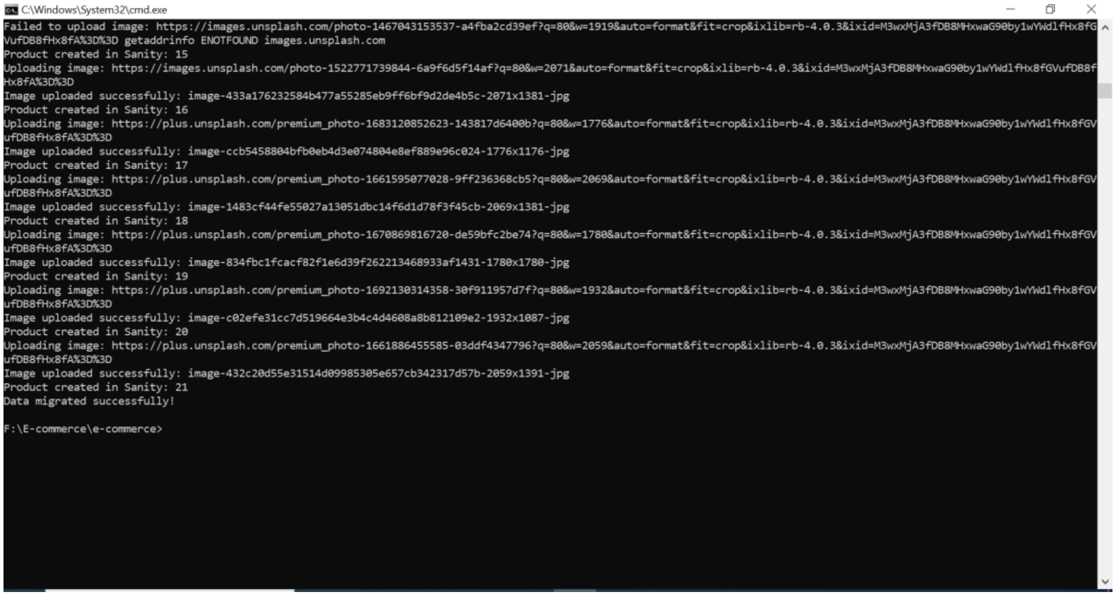
The rest of the schema remains unchanged.



```
export default {
  name: 'product',
  title: 'Product',
  type: 'document',
  fields: [
    {
      name: 'id',
      title: 'ID',
      type: 'string',
    },
    {
      name: 'name',
      title: 'Name',
      type: 'string',
    },
    {
      name: 'image',
      title: 'Image',
      type: 'image',
      options: {
        hotspot: true,
      },
    },
    {
      name: 'imagePath',
      title: 'Image Path',
      type: 'url',
    },
    {
      name: 'price',
```

Data Import Successfully:

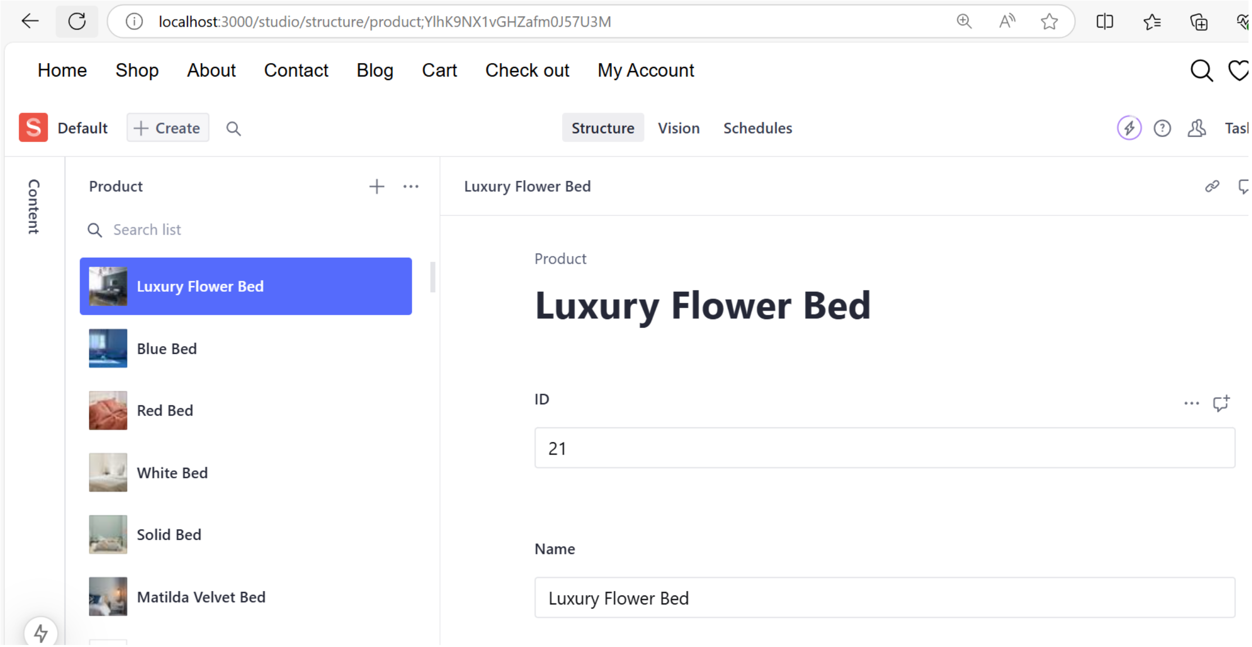
The products were successfully imported into the Sanity CMS



```
Failed to upload image: https://images.unsplash.com/photo-1467043153537-a4fba2cd39ef?q=80&w=1919&auto=format&fit=crop&ixlib=rb-4.0.3&ixid=M3wxMjA3fDB8MHxwaG90by1wYWdlfHx8fG
VufDB8fHx8fA%3D%3D getaddrinfo ENOTFOUND images.unsplash.com
Product created in Sanity: 15
Uploading image: https://images.unsplash.com/photo-1522771739844-6a9f6d5f14af?q=80&w=2071&auto=format&fit=crop&ixlib=rb-4.0.3&ixid=M3wxMjA3fDB8MHxwaG90by1wYWdlfHx8fGVufDB8f
Hx8fA%3D%3D
Image uploaded successfully: image-433a176232584b477a55285eb9ff6bf9d2de4b5c-2071x1381-jpg
Product created in Sanity: 16
Uploading image: https://plus.unsplash.com/premium_photo-1683120852623-143817d6400b?q=80&w=1776&auto=format&fit=crop&ixlib=rb-4.0.3&ixid=M3wxMjA3fDB8MHxwaG90by1wYWdlfHx8fGV
ufDB8fHx8fA%3D%3D
Image uploaded successfully: image-ccb5458804bfb0eb4d3e074804e8ef889e96c024-1776x1176-jpg
Product created in Sanity: 17
Uploading image: https://plus.unsplash.com/premium_photo-1661595077028-9ff236368cb5?q=80&w=2069&auto=format&fit=crop&ixlib=rb-4.0.3&ixid=M3wxMjA3fDB8MHxwaG90by1wYWdlfHx8fGV
ufDB8fHx8fA%3D%3D
Image uploaded successfully: image-1483cf44fe55027a13051dbc14f6d1d78f3f45cb-2069x1381-jpg
Product created in Sanity: 18
Uploading image: https://plus.unsplash.com/premium_photo-1670869816720-de59bfc2be74?q=80&w=1780&auto=format&fit=crop&ixlib=rb-4.0.3&ixid=M3wxMjA3fDB8MHxwaG90by1wYWdlfHx8fGV
ufDB8fHx8fA%3D%3D
Image uploaded successfully: image-834fbc1fcacf82f1e6d39f262213468933af1431-1780x1780-jpg
Product created in Sanity: 19
Uploading image: https://plus.unsplash.com/premium_photo-1692130314358-30f911957d7f?q=80&w=1932&auto=format&fit=crop&ixlib=rb-4.0.3&ixid=M3wxMjA3fDB8MHxwaG90by1wYWdlfHx8fGV
ufDB8fHx8fA%3D%3D
Image uploaded successfully: image-c02efe31cc7d519664e3b4c4d4608a8b812109e2-1932x1087-jpg
Product created in Sanity: 20
Uploading image: https://plus.unsplash.com/premium_photo-1661886455585-03ddf4347796?q=80&w=2059&auto=format&fit=crop&ixlib=rb-4.0.3&ixid=M3wxMjA3fDB8MHxwaG90by1wYWdlfHx8fGV
ufDB8fHx8fA%3D%3D
Image uploaded successfully: image-432c20d55e31514d09985305e657cb342317d57b-2059x1391-jpg
Product created in Sanity: 21
Data migrated successfully!

F:\E-commerce\e-commerce>
```

<u>Data display in Sanity:</u>

Sanity CMS fields with the fetched data.



Luxury Flower Bed
Blue Bed
Red Bed
White Bed
Solid Bed
Matilda Velvet Bed

Luxury Flower Bed

Product

Luxury Flower Bed

ID

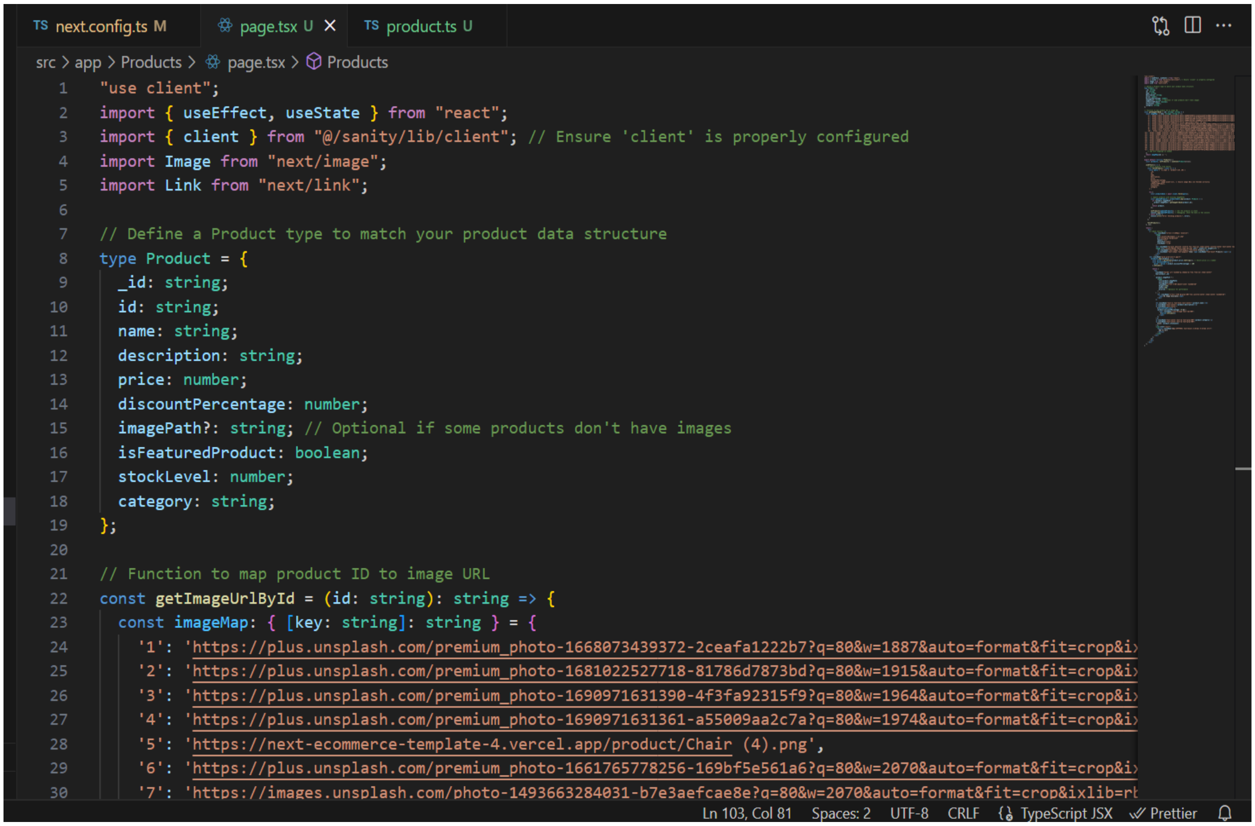
21

Name

Luxury Flower Bed

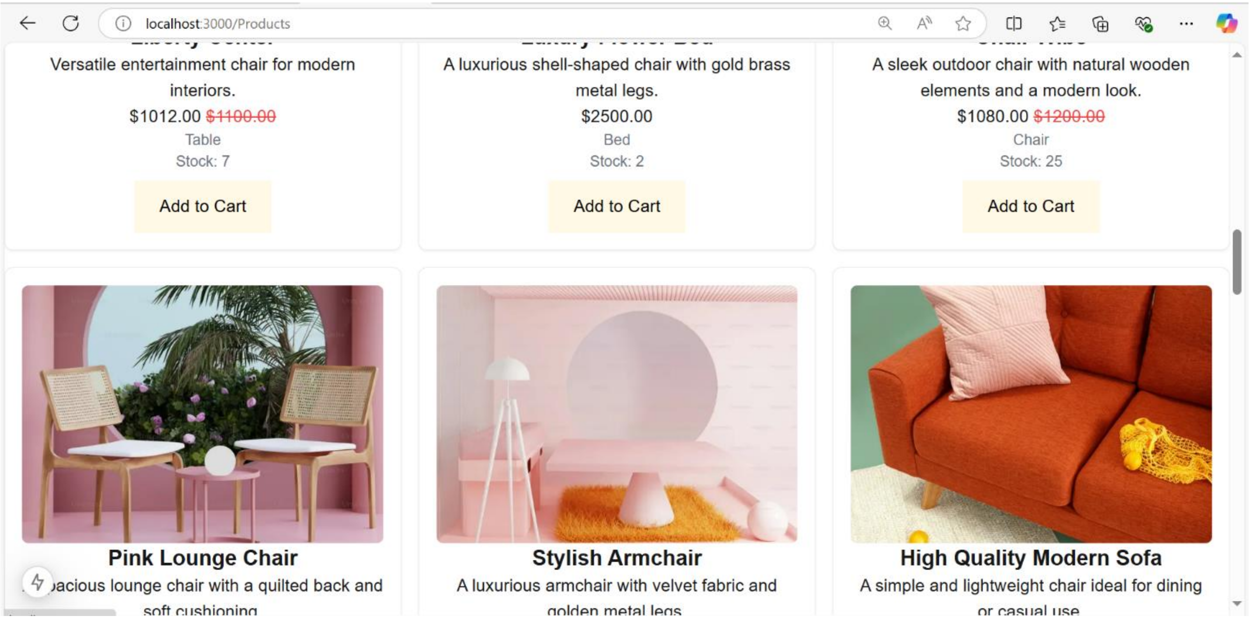
Fetching Data from Sanity to Frontend:

The code to fetch data from Sanity and display it on the frontend



```tsx
"use client";
import { useEffect, useState } from "react";
import { client } from "@/sanity/lib/client"; // Ensure 'client' is properly configured
import Image from "next/image";
import Link from "next/link";

// Define a Product type to match your product data structure
type Product = {
  _id: string;
  id: string;
  name: string;
  description: string;
  price: number;
  discountPercentage: number;
  imagePath?: string; // Optional if some products don't have images
  isFeaturedProduct: boolean;
  stockLevel: number;
  category: string;
};

// Function to map product ID to image URL
const getImageUrlById = (id: string): string => {
  const imageMap: { [key: string]: string } = {
    '1': 'https://plus.unsplash.com/premium_photo-1668073439372-2ceafa1222b7?q=80&w=1887&auto=format&fit=crop&i
    '2': 'https://plus.unsplash.com/premium_photo-1681022527718-81786d7873bd?q=80&w=1915&auto=format&fit=crop&i
    '3': 'https://plus.unsplash.com/premium_photo-1690971631390-4f3fa92315f9?q=80&w=1964&auto=format&fit=crop&i
    '4': 'https://plus.unsplash.com/premium_photo-1690971631361-a55009aa2c7a?q=80&w=1974&auto=format&fit=crop&i
    '5': 'https://next-ecommerce-template-4.vercel.app/product/Chair (4).png',
    '6': 'https://plus.unsplash.com/premium_photo-1661765778256-169bf5e561a6?q=80&w=2070&auto=format&fit=crop&i
    '7': 'https://images.unsplash.com/photo-1493663284031-b7e3aefcae8e?q=80&w=2070&auto=format&fit=crop&ixlib=r
```

Data Displayed on Frontend:



localhost:3000/Products

Versatile entertainment chair for modern interiors.
$1012.00 ~~$1100.00~~
Table
Stock: 7
Add to Cart

A luxurious shell-shaped chair with gold brass metal legs.
$2500.00
Bed
Stock: 2
Add to Cart

A sleek outdoor chair with natural wooden elements and a modern look.
$1080.00 ~~$1200.00~~
Chair
Stock: 25
Add to Cart

Pink Lounge Chair
pacious lounge chair with a quilted back and soft cushioning

Stylish Armchair
A luxurious armchair with velvet fabric and golden metal legs

High Quality Modern Sofa
A simple and lightweight chair ideal for dining or casual use

Conclusion:

Day 3 marked a significant milestone in the development of the e-commerce platform, with key achievements in API integration, schema adjustments, data migration, and frontend data display. These advancements not only enhanced the platform's functionality but also prepared it for future scalability and user-centric enhancements.