DAY 3
API INTEGRATION AND DATA MIGRATION

Name: Farah Shabir
Roll No:00006855
Time: 9:00 AM to 12:00 PM
Slot: Sunday

Day 3 - API Integration and Data Migration Report - Bandage

Objective:

On Day 3, the focus was on integrating API data into the Sanity CMS for the Bandage project to enable dynamic product updates for the marketplace. This integration provided a more efficient and scalable alternative to manual data entry, ensuring that product content remains up-to-date effortlessly.

1. Sanity CMS Schema Design:

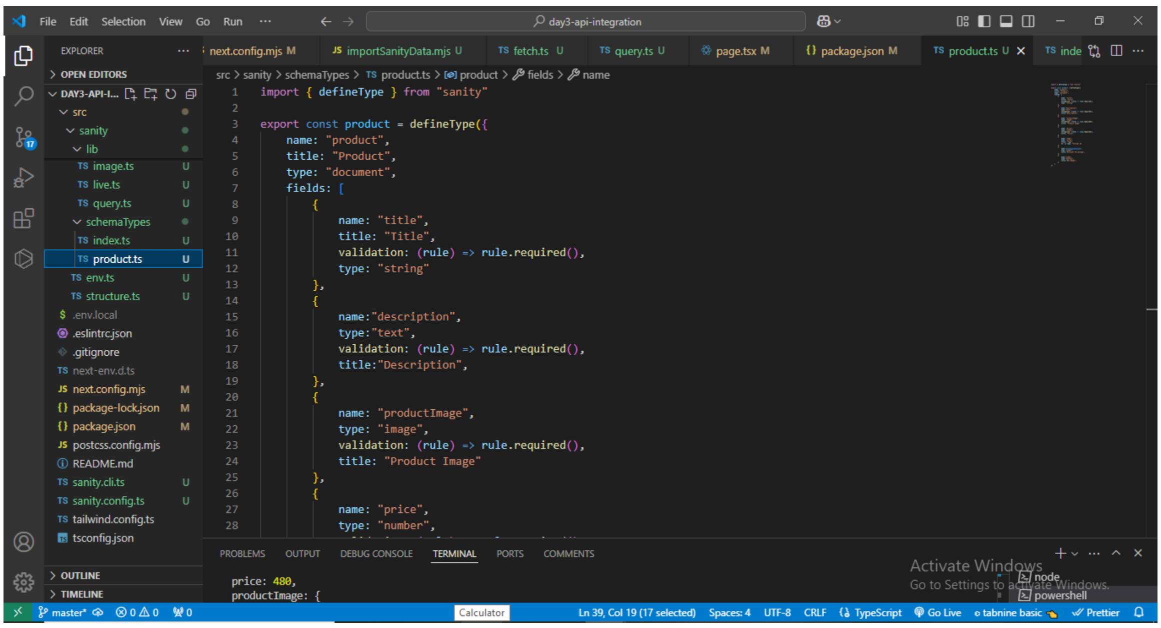
To facilitate seamless handling of product data, I designed a schema named product in Sanity CMS. The schema consists of the following fields:

Main Fields:

- **title**: The product title (string type).
- **description**: A detailed description of the product (text type).
- **productImage**: The main product image (image type).
- **price**: The price of the product (number type).
- **tags**: An array of tags to categorize the product (array of strings).
- **discountPercentage**: The discount percentage applied to the product (number type).
- **isNew**: A boolean flag indicating whether the product is new (boolean type).

This schema ensures that all necessary product information is captured and properly structured within the Sanity CMS, making it easy to manage and update products dynamically.

Code Snippet:



src > sanity > schemaTypes > product.ts > product > fields > name

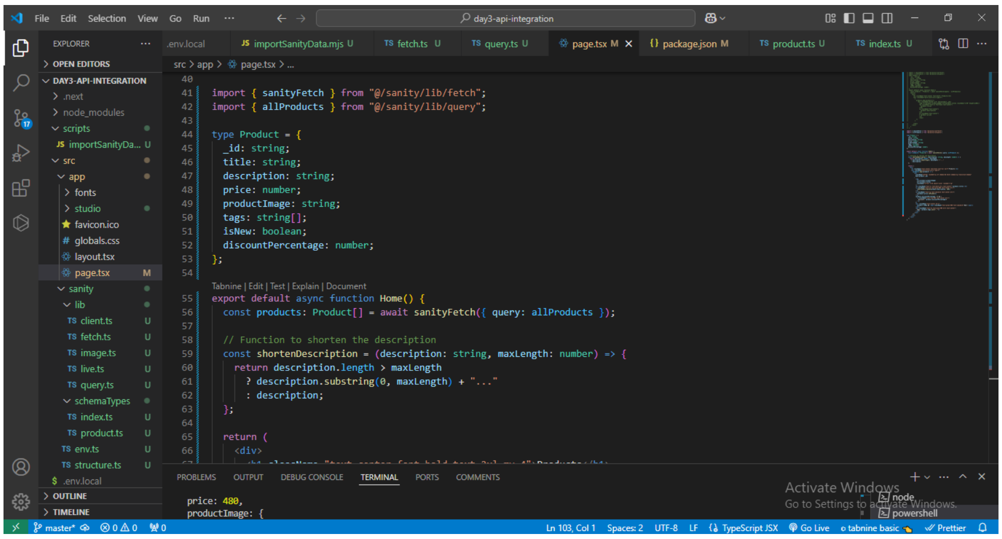
```
import { defineType } from "sanity"

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",
            validation: (rule) => rule.required(),
            title: "Product Image"
        },
        {
            name: "price",
            type: "number",
```

```
price: 480,
productImage: {
```

2. API Integration and Data Migration:

API Data Fetching:

I retrieved product data from an external API, including images, titles, descriptions, prices, and tags. This data was then mapped to the appropriate fields in the Sanity CMS schema, enabling smooth integration and dynamic content management.



```tsx
import { sanityFetch } from "@/sanity/lib/fetch";
import { allProducts } from "@/sanity/lib/query";

type Product = {
  _id: string;
  title: string;
  description: string;
  price: number;
  productImage: string;
  tags: string[];
  isNew: boolean;
  discountPercentage: number;
};

export default async function Home() {
  const products: Product[] = await sanityFetch({ query: allProducts });

  // Function to shorten the description
  const shortenDescription = (description: string, maxLength: number) => {
    return description.length > maxLength
      ? description.substring(0, maxLength) + "..."
      : description;
  };

  return (
    <div>
```

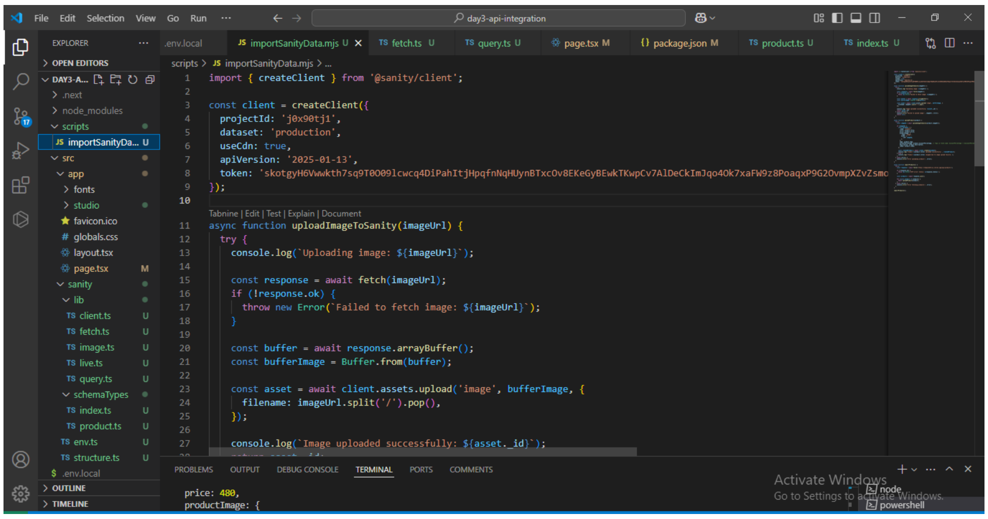
```
price: 480,
productImage: {
```

Data Population in Sanity CMS:

After fetching the API data, I dynamically populated the product fields in Sanity CMS. This automated the process of filling in product information, ensuring consistent and accurate data across the platform.

Data Migration:

Using the Sanity CLI, I exported the dataset from Sanity CMS for backup and later re-imported it for testing purposes. This migration process ensured that all the data was correctly structured and displayed as expected on the frontend.



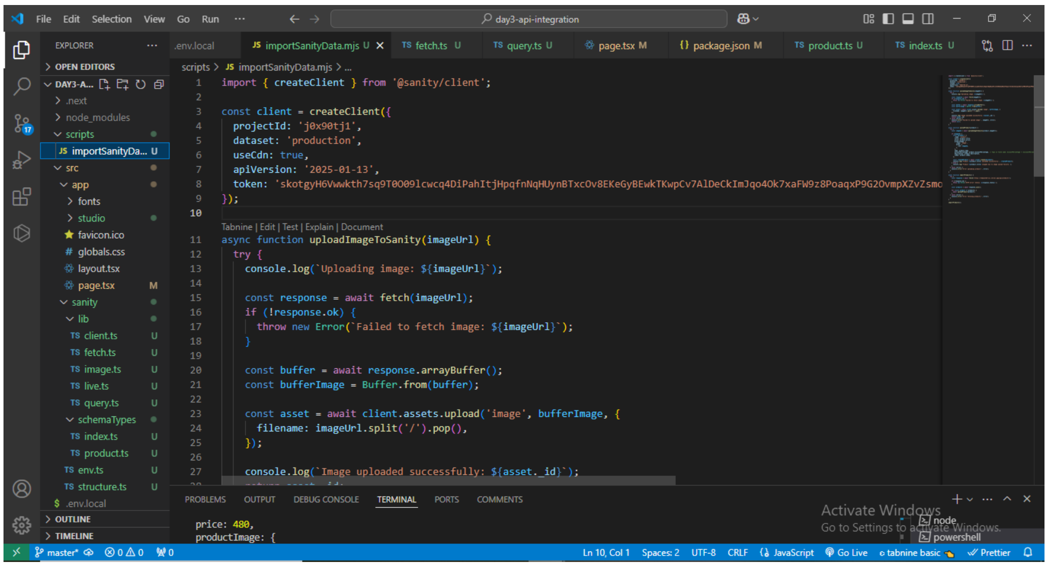
```js
import { createClient } from '@sanity/client';

const client = createClient({
  projectId: 'j0x90tj1',
  dataset: 'production',
  useCdn: true,
  apiVersion: '2025-01-13',
  token: 'skotgyH6Vwwkth7sq9T0O09lcwcq4DiPahItjHpqfnNqHUynBTxcOv8EKeGyBEwkTKwpCv7AlDeCkImJqo4Ok7xaFW9z8PoaqxP9G2OvmpXZvZsmo
});

async function uploadImageToSanity(imageUrl) {
  try {
    console.log(`Uploading image: ${imageUrl}`);

    const response = await fetch(imageUrl);
    if (!response.ok) {
      throw new Error(`Failed to fetch image: ${imageUrl}`);
    }

    const buffer = await response.arrayBuffer();
    const bufferImage = Buffer.from(buffer);

    const asset = await client.assets.upload('image', bufferImage, {
      filename: imageUrl.split('/').pop(),
    });

    console.log(`Image uploaded successfully: ${asset._id}`);
```

```
price: 480,
productImage: {
```

3. Steps Taken for Data Migration:

Exporting Data:

The initial step was to export the data from Sanity CMS using the Sanity CLI. This action created a secure backup of all product data, ensuring its safety before continuing with any subsequent operations.



```
import { createClient } from '@sanity/client';

const client = createClient({
  projectId: 'j0x90tj1',
  dataset: 'production',
  useCdn: true,
  apiVersion: '2025-01-13',
  token: 'skotgyH6Vwwkth7sq9T0O09lcwcq4DiPahItjHpqfnNqHUynBTxcOv8EKeGyBEwkTKwpCv7AlDeCkImJqo4Ok7xaFW9z8PoaqxP9G2OvmpXZvZsmo
});

async function uploadImageToSanity(imageUrl) {
  try {
    console.log(`Uploading image: ${imageUrl}`);

    const response = await fetch(imageUrl);
    if (!response.ok) {
      throw new Error(`Failed to fetch image: ${imageUrl}`);
    }

    const buffer = await response.arrayBuffer();
    const bufferImage = Buffer.from(buffer);

    const asset = await client.assets.upload('image', bufferImage, {
      filename: imageUrl.split('/').pop(),
    });

    console.log(`Image uploaded successfully: ${asset._id}`);
```

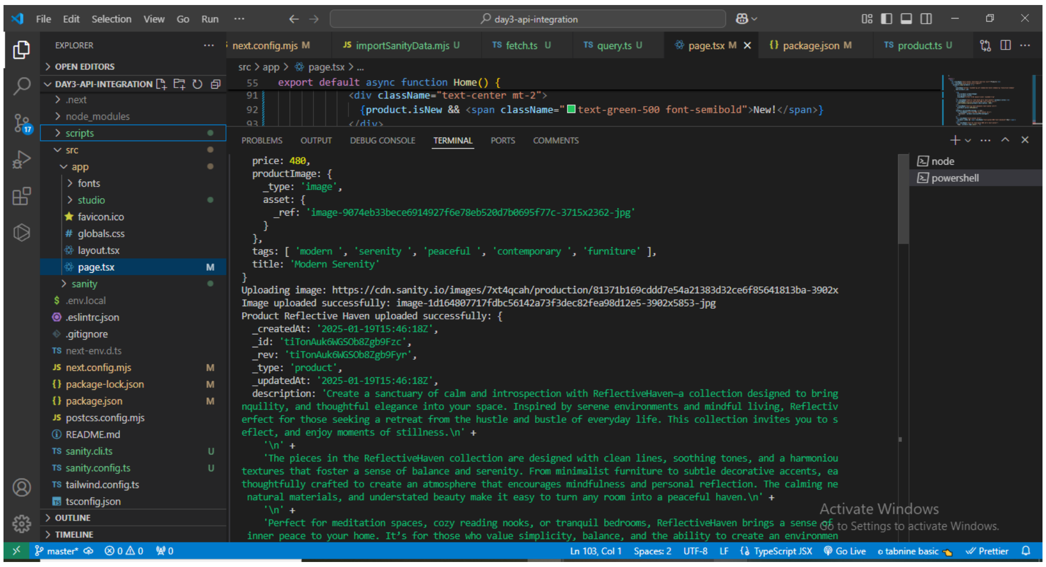
```
price: 480,
productImage: {
```

Verification of Data:

The exported JSON structure was reviewed to ensure that all fields were populated correctly. This step ensured that the data would be accurately displayed when fetched and rendered on the frontend.

Re-importing Data:

After verification, the dataset was re-imported into Sanity CMS. This confirmed that the data migration was successful and the system was working as expected.

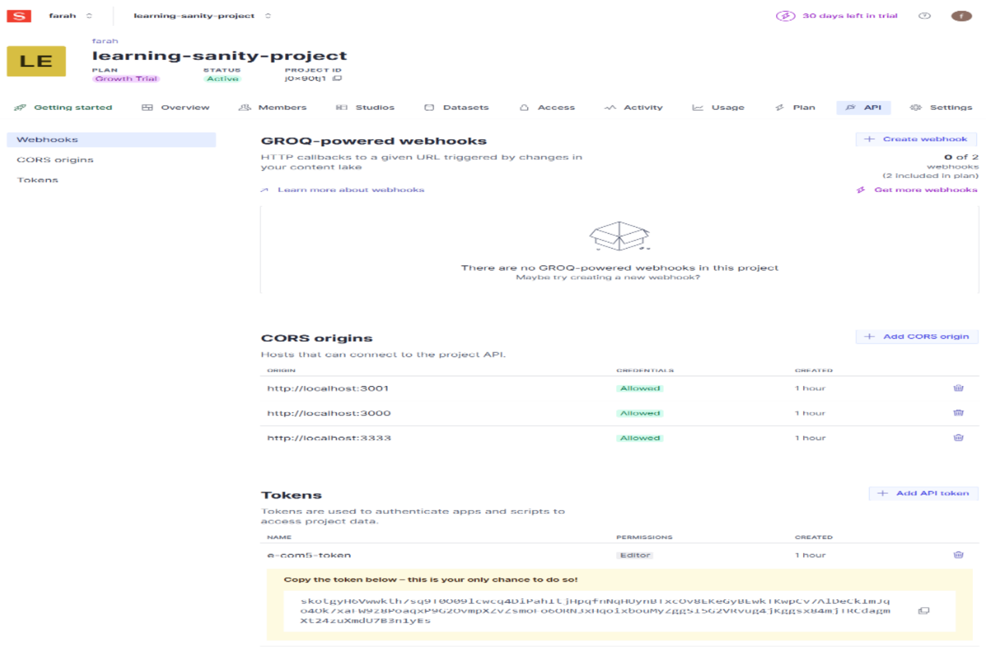


```
export default async function Home() {
            <div className="text-center mt-2">
              {product.isNew && <span className="text-green-500 font-semibold">New!</span>}
```

```
  price: 480,
  productImage: {
    _type: 'image',
    asset: {
      _ref: 'image-9074eb33bece6914927f6e78eb520d7b0695f77c-3715x2362-jpg'
    }
  },
  tags: [ 'modern ', 'serenity ', 'peaceful ', 'contemporary ', 'furniture' ],
  title: 'Modern Serenity'
}
Uploading image: https://cdn.sanity.io/images/7xt4qcah/production/81371b169cddd7e54a21383d32ce6f85641813ba-3902x
Image uploaded successfully: image-1d164807717fdbc56142a73f3dec82fea98d12e5-3902x5853-jpg
Product Reflective Haven uploaded successfully: {
  _createdAt: '2025-01-19T15:46:18Z',
  _id: 'tiTonAuk6WGSOb8Zgb9Fzc',
  _rev: 'tiTonAuk6WGSOb8Zgb9Fyr',
  _type: 'product',
  _updatedAt: '2025-01-19T15:46:18Z',
  description: 'Create a sanctuary of calm and introspection with ReflectiveHaven—a collection designed to bring
nquility, and thoughtful elegance into your space. Inspired by serene environments and mindful living, Reflectiv
erfect for those seeking a retreat from the hustle and bustle of everyday life. This collection invites you to s
eflect, and enjoy moments of stillness.\n' +
    '\n' +
    'The pieces in the ReflectiveHaven collection are designed with clean lines, soothing tones, and a harmoniou
textures that foster a sense of balance and serenity. From minimalist furniture to subtle decorative accents, ea
thoughtfully crafted to create an atmosphere that encourages mindfulness and personal reflection. The calming ne
 natural materials, and understated beauty make it easy to turn any room into a peaceful haven.\n' +
    '\n' +
    'Perfect for meditation spaces, cozy reading nooks, or tranquil bedrooms, ReflectiveHaven brings a sense of
 inner peace to your home. It's for those who value simplicity, balance, and the ability to create an environmen
```

4. Tools Used:

Sanity Studio:
Used for schema creation, content management, and displaying product data.



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learning-sanity-project

PLAN: Growth Trial STATUS: Active PROJECT ID: j0×90tj1

GROQ-powered webhooks
HTTP callbacks to a given URL triggered by changes in your content lake

0 of 2 webhooks (2 included in plan)

There are no GROQ-powered webhooks in this project
Maybe try creating a new webhook?

CORS origins
Hosts that can connect to the project API.

ORIGIN	CREDENTIALS	CREATED
http://localhost:3001	Allowed	1 hour
http://localhost:3000	Allowed	1 hour
http://localhost:3333	Allowed	1 hour

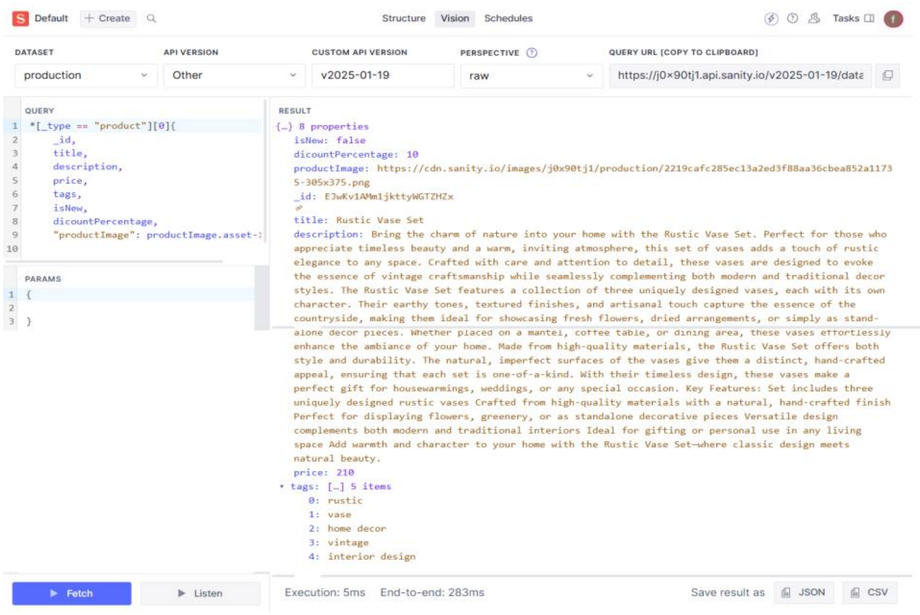
Tokens
Tokens are used to authenticate apps and scripts to access project data.

NAME	PERMISSIONS	CREATED
e-com5-token	Editor	1 hour

Copy the token below – this is your only chance to do so!

```
skotgyH6VwwkLh/sq9T00091cwcq4DiPahiLjHpqfnNqHUynBTxcOv8EKeGyBEwkTKwpCv/AlDeCk1mJq
o40k/xaFW9z8PoaqxP9G2OvmpXZvZsmoFo6ORNJxHqoixbouMyZggS15G2VRvug4jKggsx84mjTRCdagm
Xt24zuXmdU7B3n1yEs
```

Sanity Vision



DATASET: production
API VERSION: Other
CUSTOM API VERSION: v2025-01-19
PERSPECTIVE: raw
QUERY URL [COPY TO CLIPBOARD]: https://j0×90tj1.api.sanity.io/v2025-01-19/data

QUERY
```
*[_type == "product"][0]{
    _id,
    title,
    description,
    price,
    tags,
    isNew,
    dicountPercentage,
    "productImage": productImage.asset-:
```

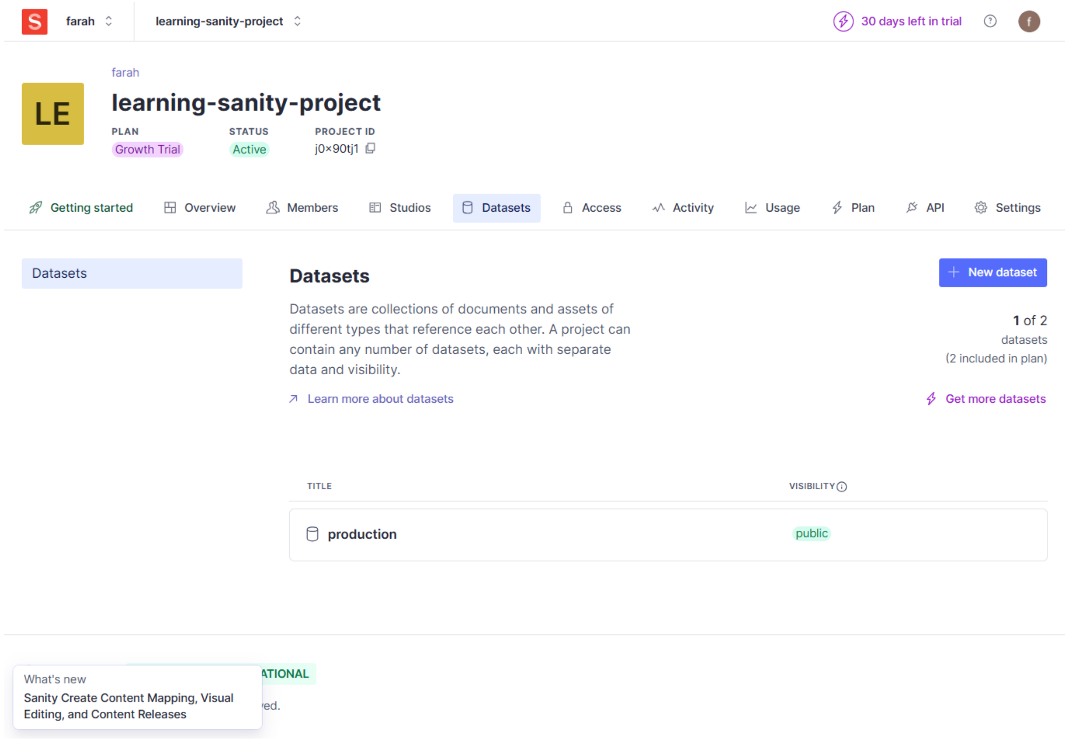
PARAMS
```
{

}
```

RESULT
```
{…} 8 properties
   isNew: false
   dicountPercentage: 10
   productImage: https://cdn.sanity.io/images/j0x90tj1/production/2219cafc285ec13a2ed3f88aa36cbea852a1173
   5-305x375.png
   _id: EJwKv1AMm1jkttyWGTZHZx
   title: Rustic Vase Set
   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. 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 ideal 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. 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. Key Features: Set includes three
   uniquely designed rustic vases Crafted from high-quality materials with a natural, hand-crafted finish
   Perfect for displaying flowers, greenery, or as standalone decorative pieces Versatile design
   complements both modern and traditional interiors Ideal for gifting or personal use in any living
   space Add warmth and character to your home with the Rustic Vase Set—where classic design meets
   natural beauty.
   price: 210
 ▾ tags: […] 5 items
     0: rustic
     1: vase
     2: home decor
     3: vintage
     4: interior design
```

Execution: 5ms End-to-end: 283ms

Sanity Dataset:



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farah

LE **learning-sanity-project**

PLAN	STATUS	PROJECT ID
Growth Trial	Active	j0x90tj1

Getting started | Overview | Members | Studios | Datasets | Access | Activity | Usage | Plan | API | Settings

Datasets

Datasets

+ New dataset

Datasets are collections of documents and assets of different types that reference each other. A project can contain any number of datasets, each with separate data and visibility.

1 of 2 datasets (2 included in plan)

Learn more about datasets

Get more datasets

TITLE	VISIBILITY
production	public

What's new
Sanity Create Content Mapping, Visual Editing, and Content Releases

ATIONAL

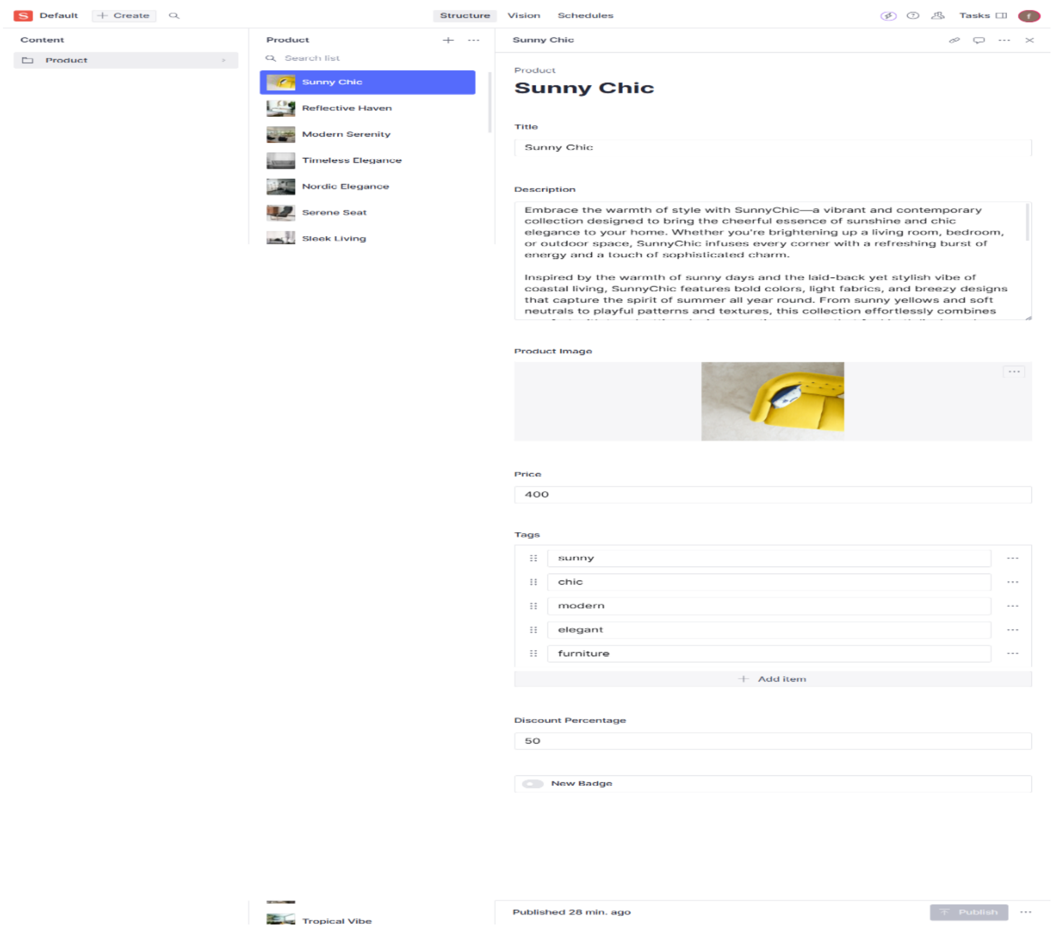
ed.

Sanity CLI:

Utilized for exporting and importing the dataset, ensuring data consistency and backup.

5. Screenshots and Frontend Display:

Sanity CMS Fields:
Screenshot showing the populated fields in Sanity Studio, displaying product details like images, descriptions, and prices.



Product
Sunny Chic

Title
Sunny Chic

Description
Embrace the warmth of style with SunnyChic—a vibrant and contemporary collection designed to bring the cheerful essence of sunshine and chic elegance to your home. Whether you're brightening up a living room, bedroom, or outdoor space, SunnyChic infuses every corner with a refreshing burst of energy and a touch of sophisticated charm.

Inspired by the warmth of sunny days and the laid-back yet stylish vibe of coastal living, SunnyChic features bold colors, light fabrics, and breezy designs that capture the spirit of summer all year round. From sunny yellows and soft neutrals to playful patterns and textures, this collection effortlessly combines

Product Image

Price
400

Tags
sunny
chic
modern
elegant
furniture

Discount Percentage
50

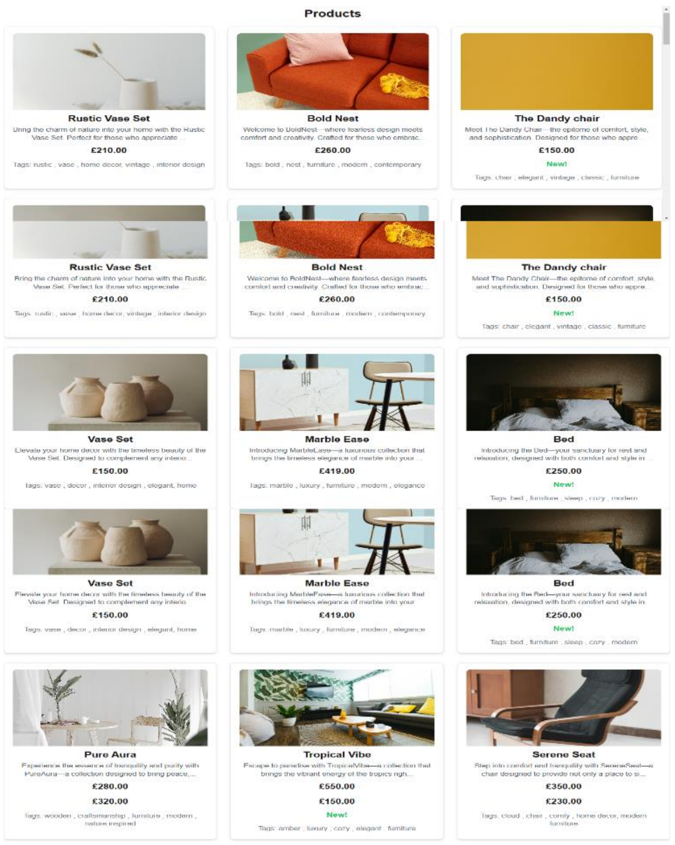
New Badge

Published 28 min. ago

Frontend Display:

- Here's a simple explanation of how the product data is displayed dynamically on the frontend of the marketplace:
- The product details, such as image, title, description, price, and tags, are fetched from the Sanity CMS and displayed in a clean, structured format.

- Each product appears in a card layout, showing the product image, title, and price, with a brief description and any relevant tags or discounts.
- The data is automatically updated whenever changes are made in Sanity CMS, ensuring the marketplace always reflects the most current information.



Products

Rustic Vase Set
Bring the charm of nature into your home with the Rustic Vase Set. Perfect for those who appreciate ...
£210.00
Tags: rustic , vase , home decor, vintage , interior design

Bold Nest
Welcome to BoldNest—where fearless design meets comfort and creativity. Crafted for those who embrac...
£260.00
Tags: bold , nest , furniture , modern , contemporary

The Dandy chair
Meet The Dandy Chair—the epitome of comfort, style, and sophistication. Designed for those who appre...
£150.00
New!
Tags: chair , elegant , vintage , classic , furniture

Rustic Vase Set
Bring the charm of nature into your home with the Rustic Vase Set. Perfect for those who appreciate ...
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Meet The Dandy Chair—the epitome of comfort, style, and sophistication. Designed for those who appre...
£150.00
New!
Tags: chair , elegant , vintage , classic , furniture

Vase Set
Elevate your home decor with the timeless beauty of the Vase Set. Designed to complement any interio...
£150.00
Tags: vase , decor , interior design , elegant, home

Marble Ease
Introducing MarbleEase—a luxurious collection that brings the timeless elegance of marble into your ...
£419.00
Tags: marble , luxury , furniture , modern , elegance

Bed
Introducing the Bed—your sanctuary for rest and relaxation, designed with both comfort and style in ...
£250.00
New!
Tags: bed , furniture , sleep , cozy , modern

Vase Set
Elevate your home decor with the timeless beauty of the Vase Set. Designed to complement any interio...
£150.00
Tags: vase , decor , interior design , elegant, home

Marble Ease
Introducing MarbleEase—a luxurious collection that brings the timeless elegance of marble into your ...
£419.00
Tags: marble , luxury , furniture , modern , elegance

Bed
Introducing the Bed—your sanctuary for rest and relaxation, designed with both comfort and style in ...
£250.00
New!
Tags: bed , furniture , sleep , cozy , modern

Pure Aura
Experience the essence of tranquility and purity with PureAura—a collection designed to bring peace,...
£280.00
£320.00
Tags: wooden , craftsmanship , furniture , modern , nature inspired

Tropical Vibe
Escape to paradise with TropicalVibe—a collection that brings the vibrant energy of the tropics righ...
£550.00
£150.00
New!
Tags: amber , luxury , cozy , elegant , furniture

Serene Seat
Step into comfort and tranquility with SereneSeat—a chair designed to provide not only a place to si...
£350.00
£230.00
Tags: cloud , chair , comfy , home decor, modern furniture

Conclusion:

The API integration and data migration were successfully executed, significantly enhancing the efficiency and scalability of the Bandage project. The integration streamlined the process of adding and updating product data in the marketplace, while the migration steps ensured data consistency and accuracy across the system. With this setup, the Bandage project is now more dynamic, scalable, and easier to maintain, offering a more seamless experience for both developers and users.