

# API Integration and Migration

## Overview:

In this document, we discuss how we integrated Sanity as the backend to manage our data and used Template 3 API for product data. We also explore the process of calling APIs to get data, the steps involved in migrating the data to Sanity, and how to fetch this data from Sanity to the frontend. We will also cover the tools and libraries used, such as dotenv, @sanity/client, @sanity/vision, and axios.

## Tools and Technologies Used

- Sanity: Headless CMS used as the backend to store and manage the product data.
- Template 3 API: External API providing product data, which we integrated into Sanity.
- Axios: A promise-based HTTP client used to make API requests and fetch data.
- dotenv: Used to manage environment variables securely.
- @sanity/client: Sanity's official client used for interacting with the Sanity backend.
- @sanity/vision: A Sanity tool that allows for running GROQ queries and visualizing data directly in the Sanity studio.

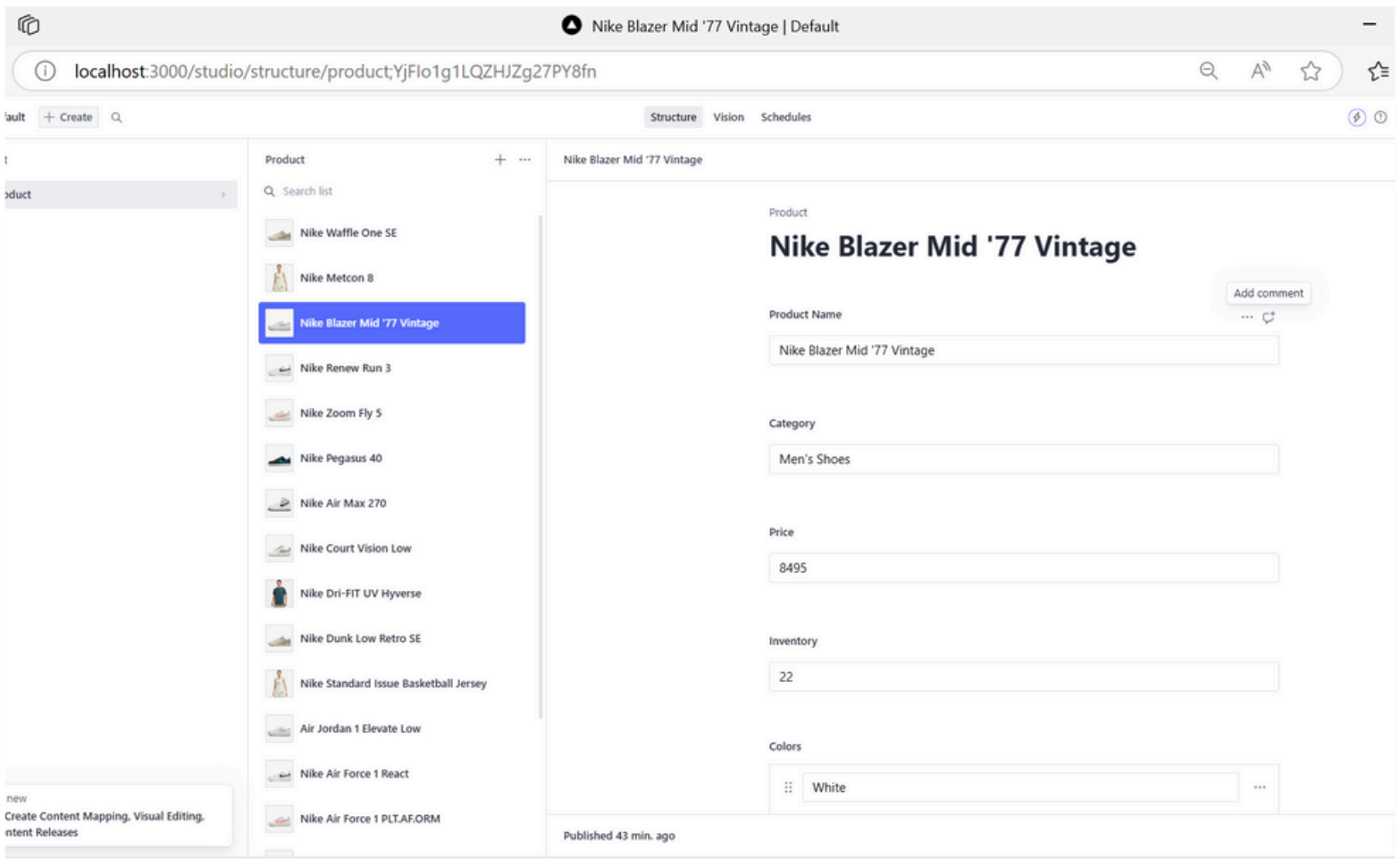
## Step 1: How to Call APIs

To integrate external data into Sanity, we first made HTTP requests to fetch the data from the external API. Here's how we did it using Axios:

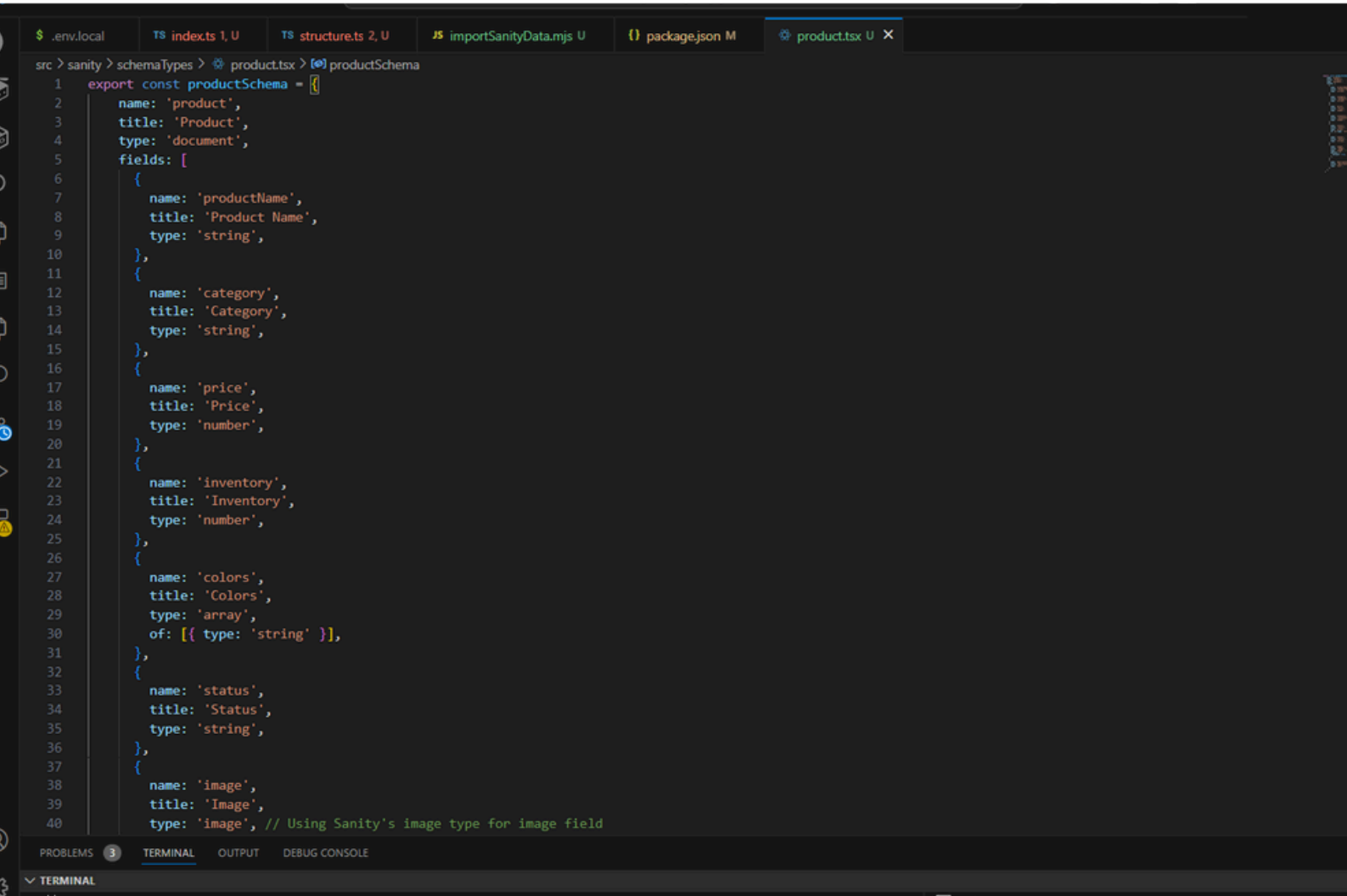
```
status: 'Just In',
image: 'https://template-03-api.vercel.app/products/1.png',
description: "The Nike Air Force 1 Mid '07 delivers timeless style with premium leather and mid-cut design. Perfect for everyday wear, it provides exceptional comfort and durability. The iconic Air-Sole cushioning adds responsive support for long-lasting performance."
},
{
  productName: 'Nike Court Vision Low Next Nature',
  category: "Men's Shoes",
  price: 4995,
  inventory: 35,
  colors: [ 'Black' ],
  status: 'Just In',
  image: 'https://template-03-api.vercel.app/products/2.png',
  description: 'The Nike Court Vision Low Next Nature combines retro basketball style with modern sustainability. Made with at least 20% recycled content, it features a sleek design, durable materials, and ultimate comfort for everyday wear.'
},
{
  productName: 'Nike Air Force 1 PLT.AF ORM',
  category: "Women's Shoes",
  price: 8695,
  inventory: 18,
  colors: [ 'White' ],
  status: 'Just In',
  image: 'https://template-03-api.vercel.app/products/3.png',
  description: "The Nike Air Force 1 PLT.AF ORM elevates the iconic AF1 silhouette with bold design updates. Featuring a platform sole and premium materials, this women's shoe redefines style and comfort in a fresh, modern way."
},
{
  productName: 'Nike Air Force 1 React',
  category: "Men's Shoes",
```

Step 2: How to Get Data on Sanity

Once the data is fetched from the external API, we need to create a Sanity document to store the data.



define the product schema in Sanity, which dictates the structure of the data we want to store.

A screenshot of a Visual Studio Code editor window. The top bar shows several tabs: .env.local, TS index.ts 1, U, TS structure.ts 2, U, JS importSanityData.mjs U, package.json M, and product.tsx U X. The active tab is product.tsx. The editor content shows a TypeScript file with the following code:

```
1 export const productSchema = {
2   name: 'product',
3   title: 'Product',
4   type: 'document',
5   fields: [
6     {
7       name: 'productName',
8       title: 'Product Name',
9       type: 'string',
10    },
11    {
12      name: 'category',
13      title: 'Category',
14      type: 'string',
15    },
16    {
17      name: 'price',
18      title: 'Price',
19      type: 'number',
20    },
21    {
22      name: 'inventory',
23      title: 'Inventory',
24      type: 'number',
25    },
26    {
27      name: 'colors',
28      title: 'Colors',
29      type: 'array',
30      of: [{ type: 'string' }],
31    },
32    {
33      name: 'status',
34      title: 'Status',
35      type: 'string',
36    },
37    {
38      name: 'image',
39      title: 'Image',
40      type: 'image', // Using Sanity's image type for image field
```

The bottom of the editor shows a panel with 'PROBLEMS 3', 'TERMINAL', 'OUTPUT', and 'DEBUG CONSOLE'. The 'TERMINAL' tab is selected, showing a prompt 't\$'.

NEXT, CREATE A CLIENT.JS FILE IN THE UTILS FOLDER TO CONFIGURE THE SANITY CLIENT AND FETCH DATA:

```

import { useState } from 'react';
import { Pieces } from 'react-pieces';

const defaultFunction = () => {
  const [products, setProducts] = useState([]);

  // Fetch products from Sanity
  const fetchProducts = async () => {
    const query = '*[_type == "product"]'; // Sanity query to fetch all products
    const productsData = await client.fetch(query); // Fetch products from Sanity

    console.log(productsData); // Log the fetched data to check the structure
    setProducts(productsData); // Update state with the fetched data
  };

  fetchProducts().catch((error) => {
    console.error('Error fetching data from Sanity:', error);
  });
};


export default function Home() {
  return (
    <div className="container mx-auto p-6">
      <h1 className="text-4xl font-bold mb-6 text-center">Product Listings</h1>
      <div className="grid grid-cols-1 sm:grid-cols-2 lg:grid-cols-4 gap-8">
        {products.map((product) => (
          <ProductCard key={product._id} product={product} />
        ))}
      </div>
    </div>
  );
}

```




# Frontend Look After fetching Data from Sanity


sessions. Featuring a stable base, durable materials, and excellent traction, it's the perfect companion for weightlifting, CrossFit, or HIIT workouts.  
Category: Men's Training Shoes




**\$10795**  
The Nike Air Force 1 Mid '07 delivers timeless style with premium leather and mid-cut design. Perfect for everyday wear, it provides exceptional comfort and durability. The iconic Air-Sole cushioning adds responsive support for long-lasting performance.  
Category: Men's Shoes




**\$8695**  
The Nike Air Force 1 PLT.AF.ORM elevates the iconic AF1 silhouette with bold design updates. Featuring a platform sole and premium materials, this women's shoe redefines style and comfort in a fresh, modern way.  
Category: Women's Shoes




**\$13295**  
The Nike Air Force 1 React takes the classic AF1 to the next level with React technology. Experience unparalleled cushioning and modern design details for all-day comfort and a bold statement of style.  
Category: Men's Shoes




**\$11895**  
The Air Jordan 1 Elevate Low features a clean, minimalist design with premium materials. Its platform sole adds a touch of height and modern edge, while ensuring comfort and durability for everyday wear.  
Category: Women's Shoes




**\$9695**  
The Nike Dunk Low Retro SE brings vintage vibes with a modern twist. Featuring premium materials and a versatile color palette, this classic sneaker is perfect for any casual occasion.  
Category: Men's Shoes



**\$2495**  
The Nike Dri-FIT UV Hyverse graphic top offers comfort and UV protection in style. Made from soft, breathable fabric, this fitness top keeps you cool and dry during workouts or casual outings.  
Category: Men's Athletic Wear



**\$13295**  
The Nike Air Max 270 features the largest Air unit yet for exceptional cushioning. Its bold design, breathable mesh upper, and vibrant colors make it a standout choice for style and comfort.  
Category: Men's Shoes



**\$11295**  
The Nike Zoom Fly 5 provides next-level speed with responsive cushioning and a sleek, aerodynamic design. Its lightweight upper and durable outsole make it ideal for race day or long-distance runs.  
Category: Men's Running Shoes

# Day 3 CheckList

API UNDERSTANDING		✓
SCHEMA VALIDATION		✓
DATA MIGRATION & API INTEGRATION		✓
SUBMISSION PREPARATION		✓