Day3 - API Integration Report-Hermes

- ## Introduction

The purpose of this report is to enhance our skills in API integration. It details the process, challenges, and solutions encountered during the integration. The Sanity tool was utilized to streamline and improve our workflow.

- # ***API Integration Process***

Provided Data

Provided API : In this integration process we were provided a **API** from one of our teachers in my case it was **Sir Okasha**.

Template 3 API : https://template-03-api.vercel.app/api/products

Other Components : we were also provided with some helping pre-build components.

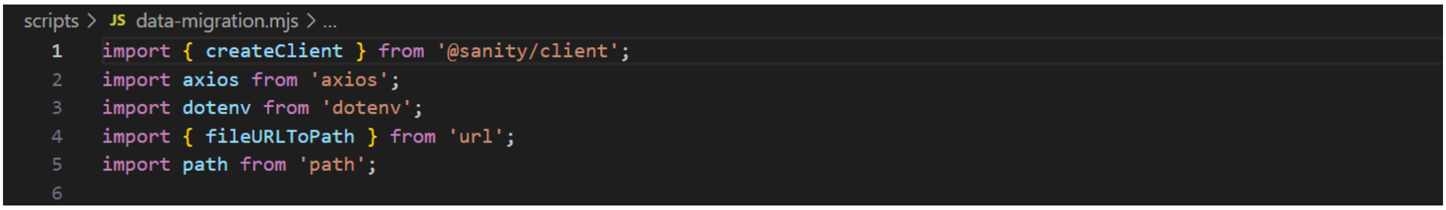
migration script : https://github.com/OkashaTanoli/template-03-api/blob/master/scripts/data-migration.mjs

sanity schema : https://github.com/OkashaTanoli/template-03-api/blob/master/src/sanity/schemaTypes/products.ts

Implementation Process

To start our implementation, first we need to take a look at the libraries that needs be installed before starting this process

Code Snippet



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

```

1. **Axios :** The main purpose of Axios library is to fetch data from an API.
2. **Sanity :** Sanity is a (Content Management System) it is commonly used for managing large amount of content or data.
3. **Dotenv :** The main purpose of dotenv is to load environment variables from a .env file into process.env in Node.js applications, enhancing security and configuration management.

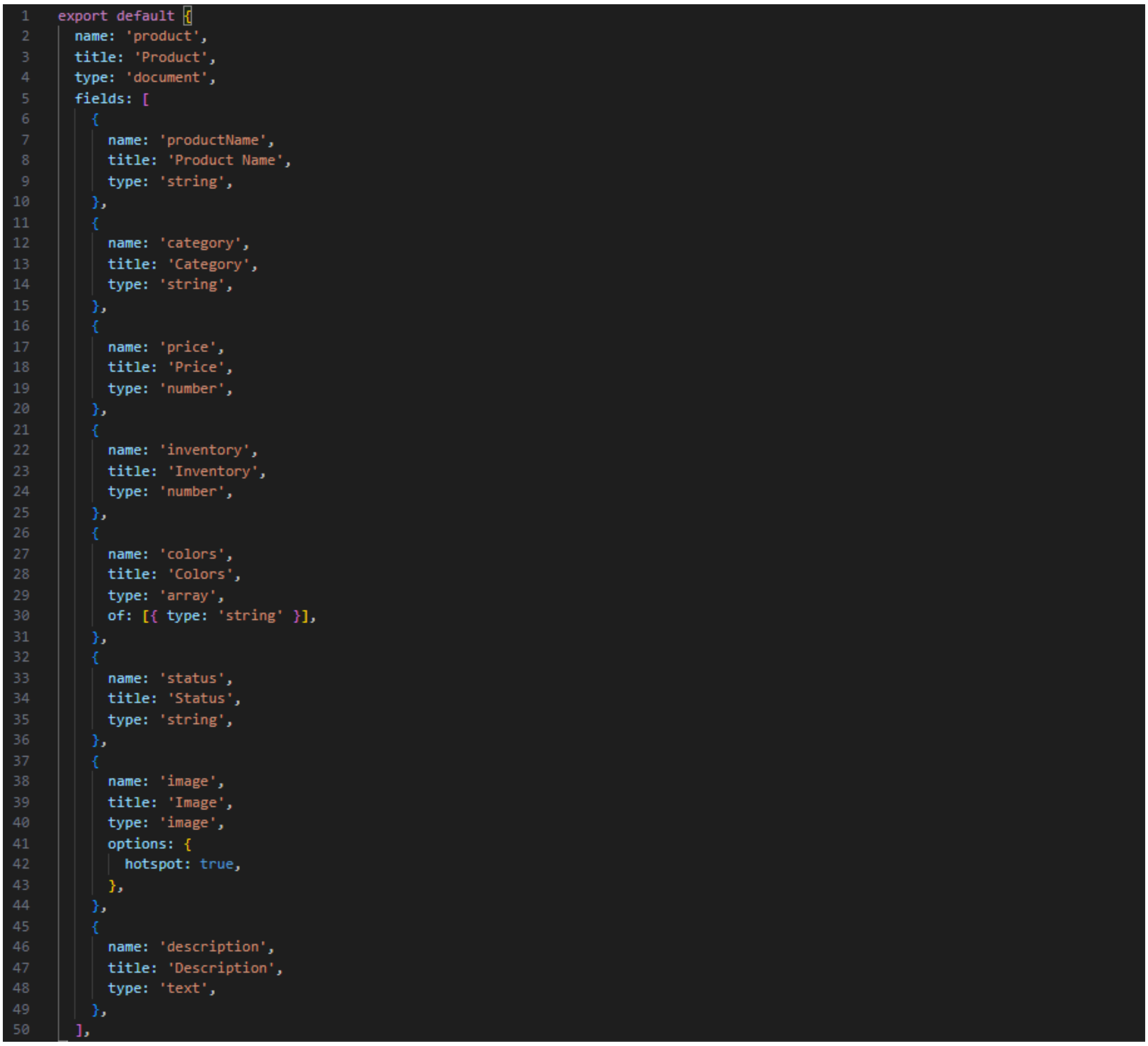
- ***Adjustment Made To Schema***

There is a minor adjustment that I did make to my schema that I enabled image hotspot which will crop and scale the image for better quality.

Enabling {hotspot} Code Snippet

```
{  name: 'image',
  title: 'Image',
  type: 'image',
  options: {
   hotspot: true, // Enables hotspot functionality for better image cropping
  },}
```

Schema Overview



```
export default {
  name: 'product',
  title: 'Product',
  type: 'document',
  fields: [
    {
      name: 'productName',
      title: 'Product Name',
      type: 'string',
    },
    {
      name: 'category',
      title: 'Category',
      type: 'string',
    },
    {
      name: 'price',
      title: 'Price',
      type: 'number',
    },
    {
      name: 'inventory',
      title: 'Inventory',
      type: 'number',
    },
    {
      name: 'colors',
      title: 'Colors',
      type: 'array',
      of: [{ type: 'string' }],
    },
    {
      name: 'status',
      title: 'Status',
      type: 'string',
    },
    {
      name: 'image',
      title: 'Image',
      type: 'image',
      options: {
        hotspot: true,
      },
    },
    {
      name: 'description',
      title: 'Description',
      type: 'text',
    },
  ],
```

• ***Migration Steps And Tools Used***

Tool Used

We have already installed the libraries **(Axios, Dotenv, sanity)** at the start of this project so we are good to go for now.

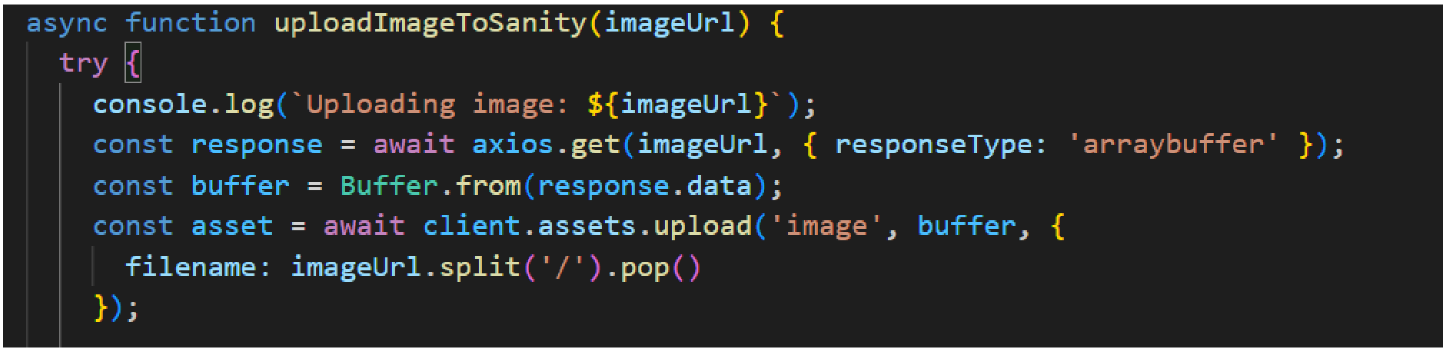
Framework Used In This Process

The Framework that is used in this process is **Next.js** as it is one of the best and fastest growing Framework out there.

Data Fetching

API data is retrieved as well as **Images** are downloaded with the help of **Axios** library that we installed in the start of out project.

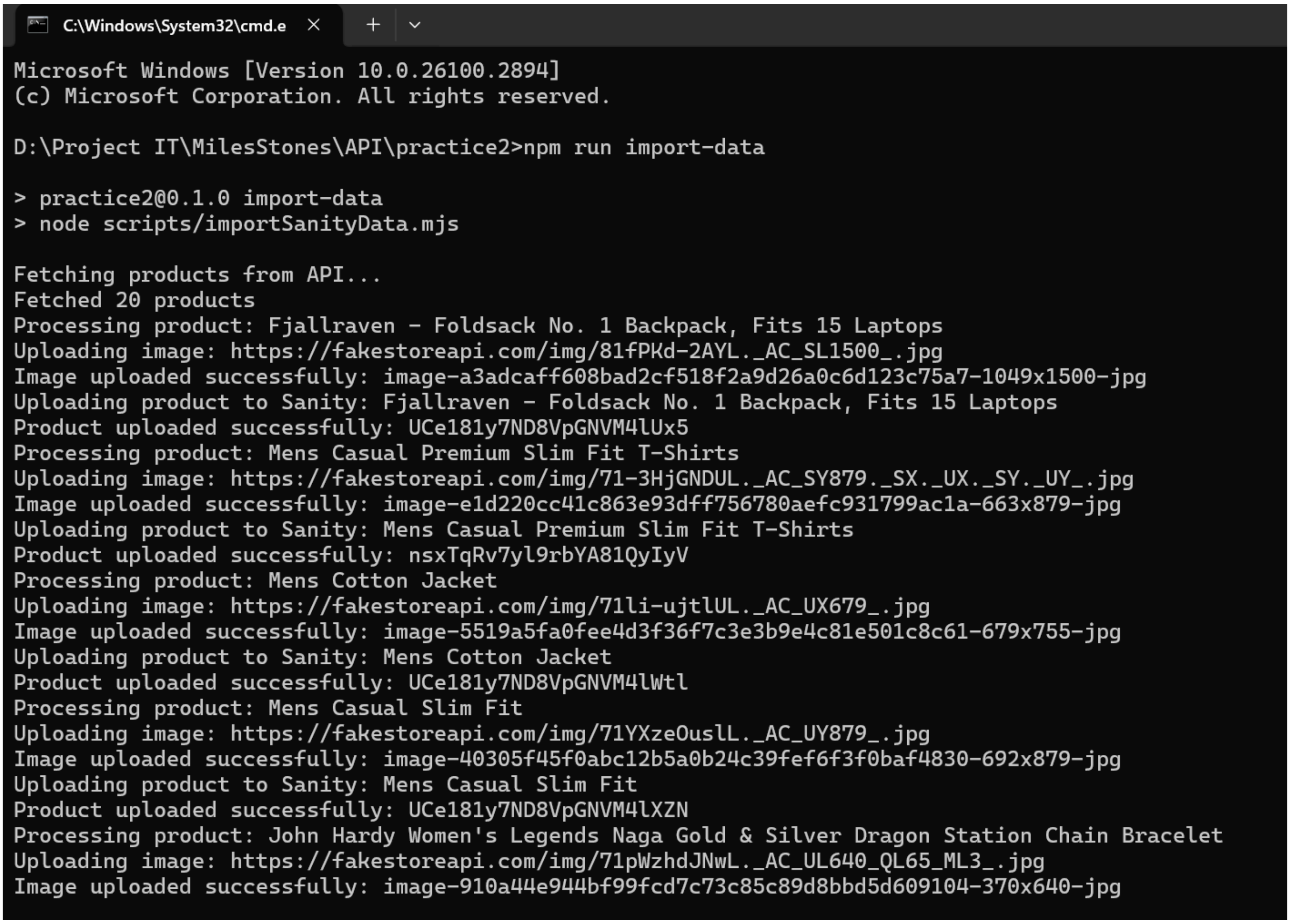
Code Snippet



```
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()
    });
```

- ***Screenshots***

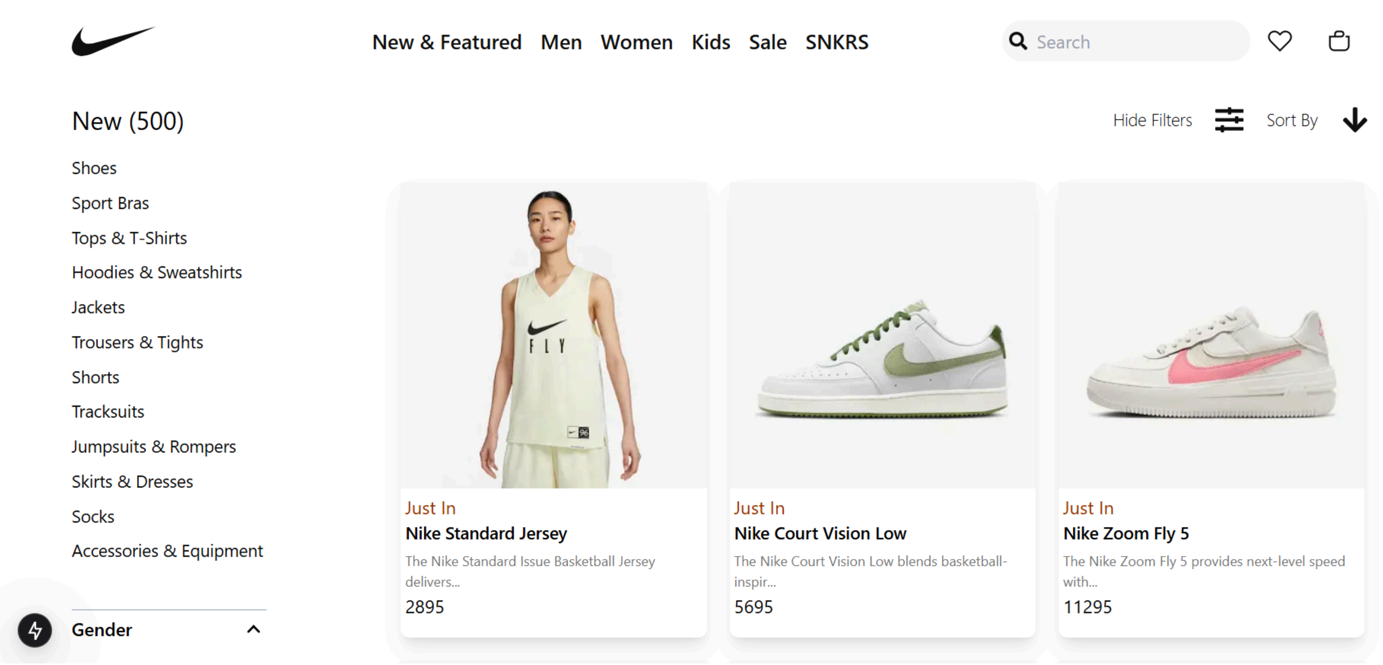
API Calls



```
Microsoft Windows [Version 10.0.26100.2894]
(c) Microsoft Corporation. All rights reserved.

D:\Project IT\MilesStones\API\practice2>npm run import-data

> practice2@0.1.0 import-data
> node scripts/importSanityData.mjs

Fetching products from API...
Fetched 20 products
Processing product: Fjallraven - Foldsack No. 1 Backpack, Fits 15 Laptops
Uploading image: https://fakestoreapi.com/img/81fPKd-2AYL._AC_SL1500_.jpg
Image uploaded successfully: image-a3adcaff608bad2cf518f2a9d26a0c6d123c75a7-1049x1500-jpg
Uploading product to Sanity: Fjallraven - Foldsack No. 1 Backpack, Fits 15 Laptops
Product uploaded successfully: UCe181y7ND8VpGNVM4lUx5
Processing product: Mens Casual Premium Slim Fit T-Shirts
Uploading image: https://fakestoreapi.com/img/71-3HjGNDUL._AC_SY879._SX._UX._SY._UY_.jpg
Image uploaded successfully: image-e1d220cc41c863e93dff756780aefc931799ac1a-663x879-jpg
Uploading product to Sanity: Mens Casual Premium Slim Fit T-Shirts
Product uploaded successfully: nsxTqRv7yl9rbYA81QyIyV
Processing product: Mens Cotton Jacket
Uploading image: https://fakestoreapi.com/img/71li-ujtlUL._AC_UX679_.jpg
Image uploaded successfully: image-5519a5fa0fee4d3f36f7c3e3b9e4c81e501c8c61-679x755-jpg
Uploading product to Sanity: Mens Cotton Jacket
Product uploaded successfully: UCe181y7ND8VpGNVM4lWtl
Processing product: Mens Casual Slim Fit
Uploading image: https://fakestoreapi.com/img/71YXzeOuslL._AC_UY879_.jpg
Image uploaded successfully: image-40305f45f0abc12b5a0b24c39fef6f3f0baf4830-692x879-jpg
Uploading product to Sanity: Mens Casual Slim Fit
Product uploaded successfully: UCe181y7ND8VpGNVM4lXZN
Processing product: John Hardy Women's Legends Naga Gold & Silver Dragon Station Chain Bracelet
Uploading image: https://fakestoreapi.com/img/71pWzhdJNwL._AC_UL640_QL65_ML3_.jpg
Image uploaded successfully: image-910a44e944bf99fcd7c73c85c89d8bbd5d609104-370x640-jpg
```

Data Successfully Displayed In The Frontend

- ## Front-End



New (500)

Shoes
Sport Bras
Tops & T-Shirts
Hoodies & Sweatshirts
Jackets
Trousers & Tights
Shorts
Tracksuits
Jumpsuits & Rompers
Skirts & Dresses
Socks
Accessories & Equipment

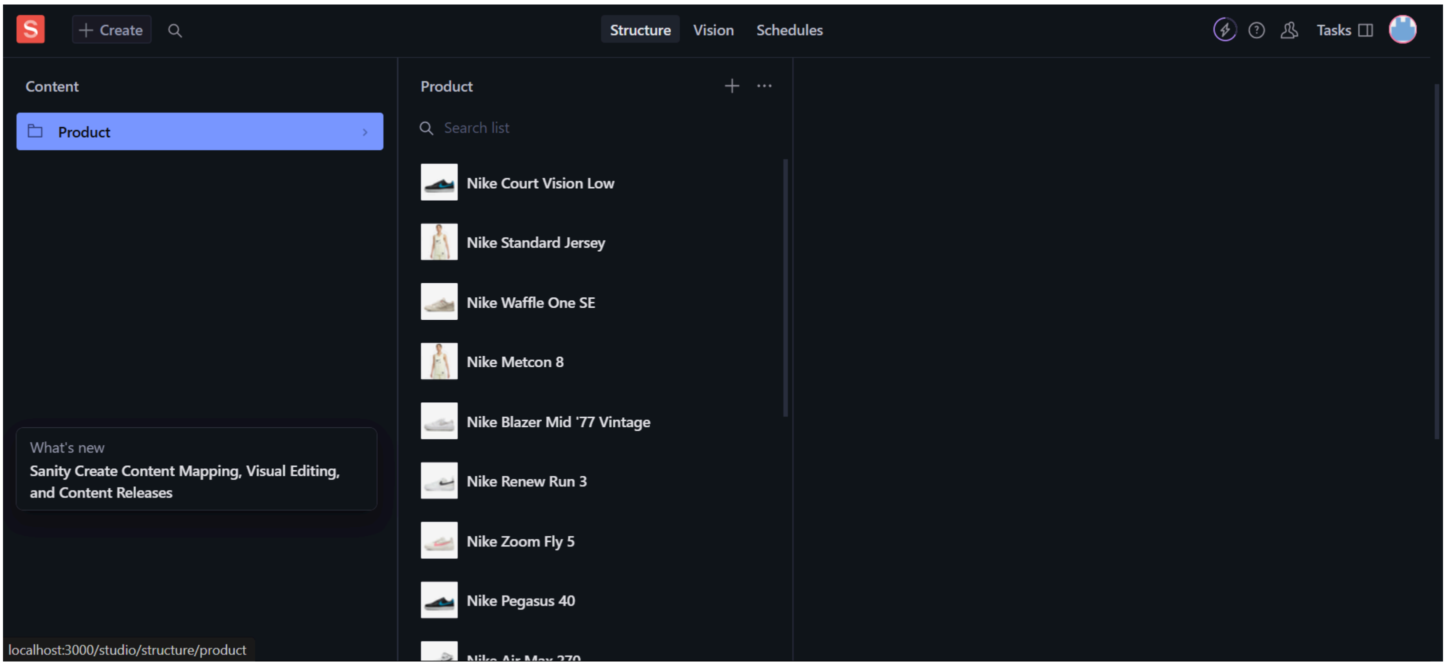
Gender

Just In
Nike Standard Jersey
The Nike Standard Issue Basketball Jersey delivers...
2895

Just In
Nike Court Vision Low
The Nike Court Vision Low blends basketball-inspir...
5695

Just In
Nike Zoom Fly 5
The Nike Zoom Fly 5 provides next-level speed with...
11295

Populated Sanity CMS Fields



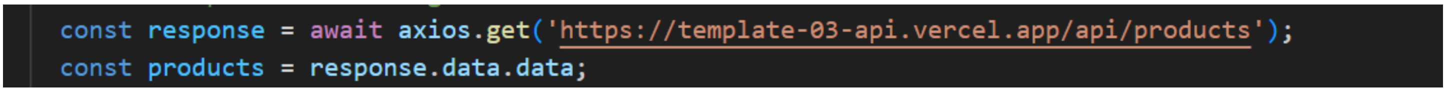
Nike Court Vision Low
Nike Standard Jersey
Nike Waffle One SE
Nike Metcon 8
Nike Blazer Mid '77 Vintage
Nike Renew Run 3
Nike Zoom Fly 5
Nike Pegasus 40
Nike Air Max 270

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

localhost:3000/studio/structure/product

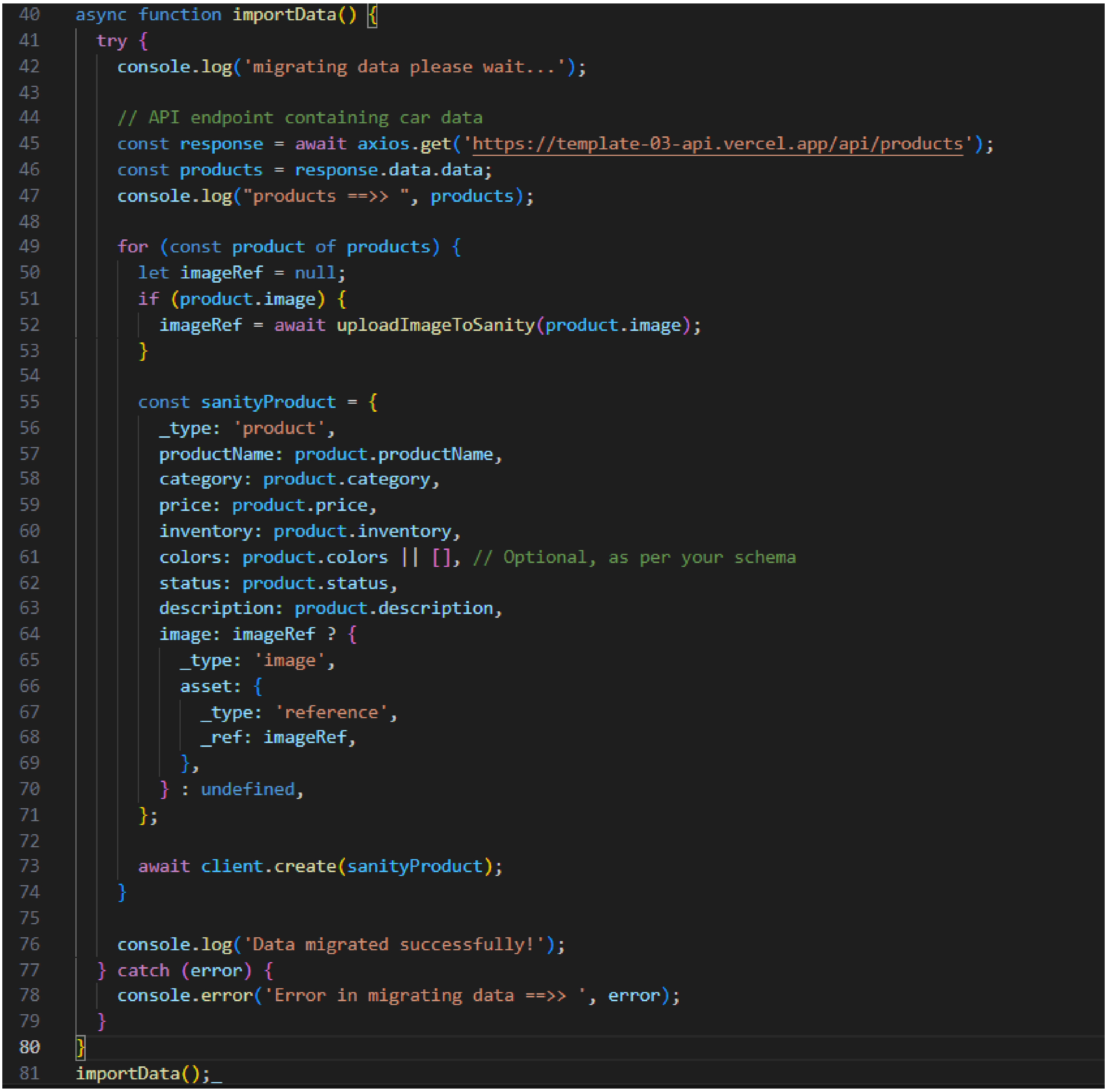
Code Snippets

API Integration



```
    const response = await axios.get('https://template-03-api.vercel.app/api/products');
    const products = response.data.data;
```

Migration Script



```
async function importData() {
  try {
    console.log('migrating data please wait...');

    // API endpoint containing car data
    const response = await axios.get('https://template-03-api.vercel.app/api/products');
    const products = response.data.data;
    console.log("products ==>> ", products);

    for (const product of products) {
      let imageRef = null;
      if (product.image) {
        imageRef = await uploadImageToSanity(product.image);
      }

      const sanityProduct = {
        _type: 'product',
        productName: product.productName,
        category: product.category,
        price: product.price,
        inventory: product.inventory,
        colors: product.colors || [], // Optional, as per your schema
        status: product.status,
        description: product.description,
        image: imageRef ? {
          _type: 'image',
          asset: {
            _type: 'reference',
            _ref: imageRef,
          },
        } : undefined,
      };

      await client.create(sanityProduct);
    }

    console.log('Data migrated successfully!');
  } catch (error) {
    console.error('Error in migrating data ==>> ', error);
  }
}
importData();
```

Check List

API Understanding	Schema Validation	Data Migration	API Integration in Next.js	Submission Preparation
✓	✓	✓	✓	✓