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HACKATHONE

Day 03

API INTEGRATION AND DATA MIGRATION REPORT

1- Api integration process

we will install sanity in our Next.js project.

Then, we will create a new project in Sanity, and use it's ID and token in our Next.js application

In the sanity folder, inside the sanity/schemaTypes folder, we will create a file named Products.ts where we will copy the schema types provided by **Sir Bilal Muhammad Khan**. Similarly, we will create another file named categories.ts to store the data for categories.

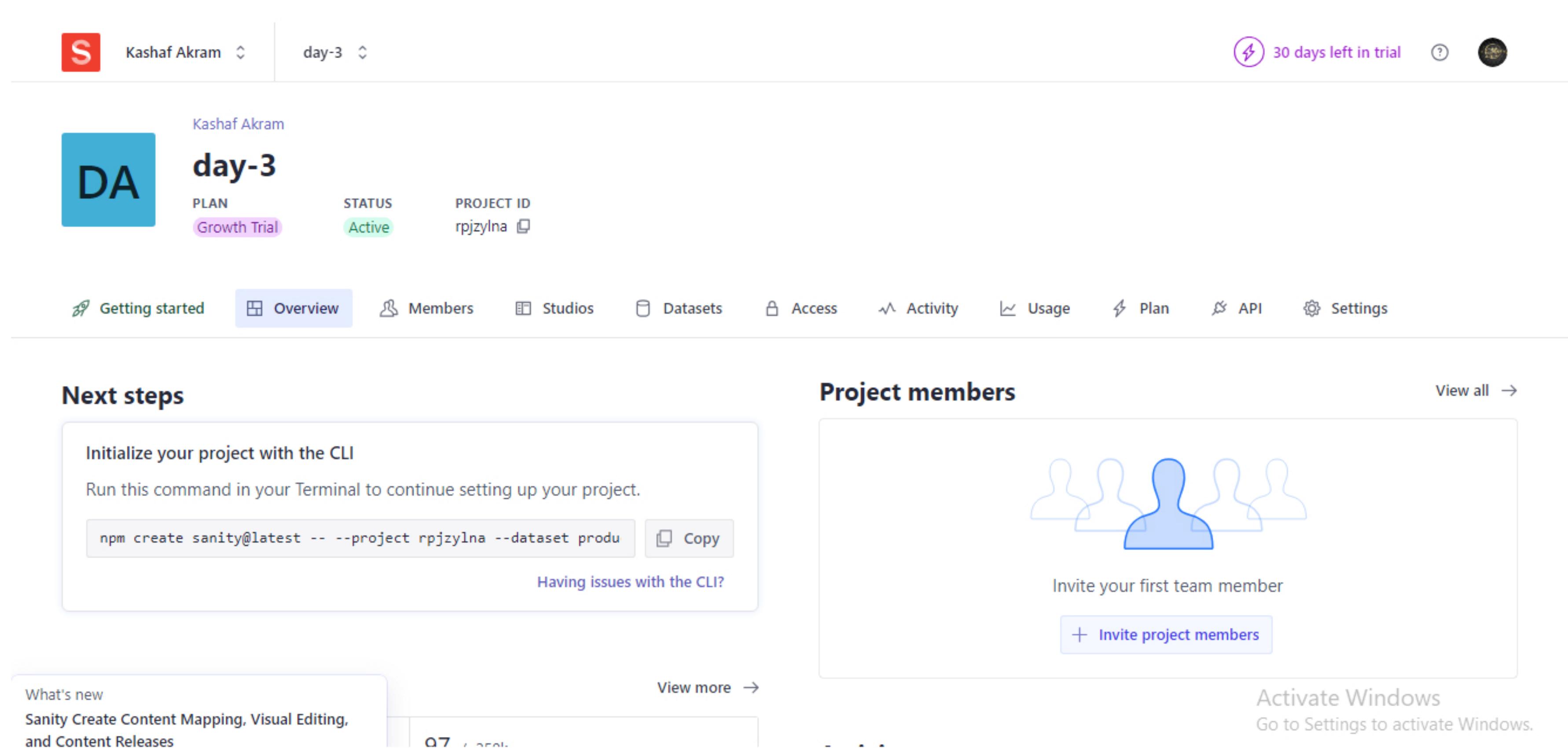
At the root, we created a folder name scripts and inside it, we created a file named importSanityData.js, where i stored the provided data

Run this command in terminal.

npm install @sanity/client axios dotenv

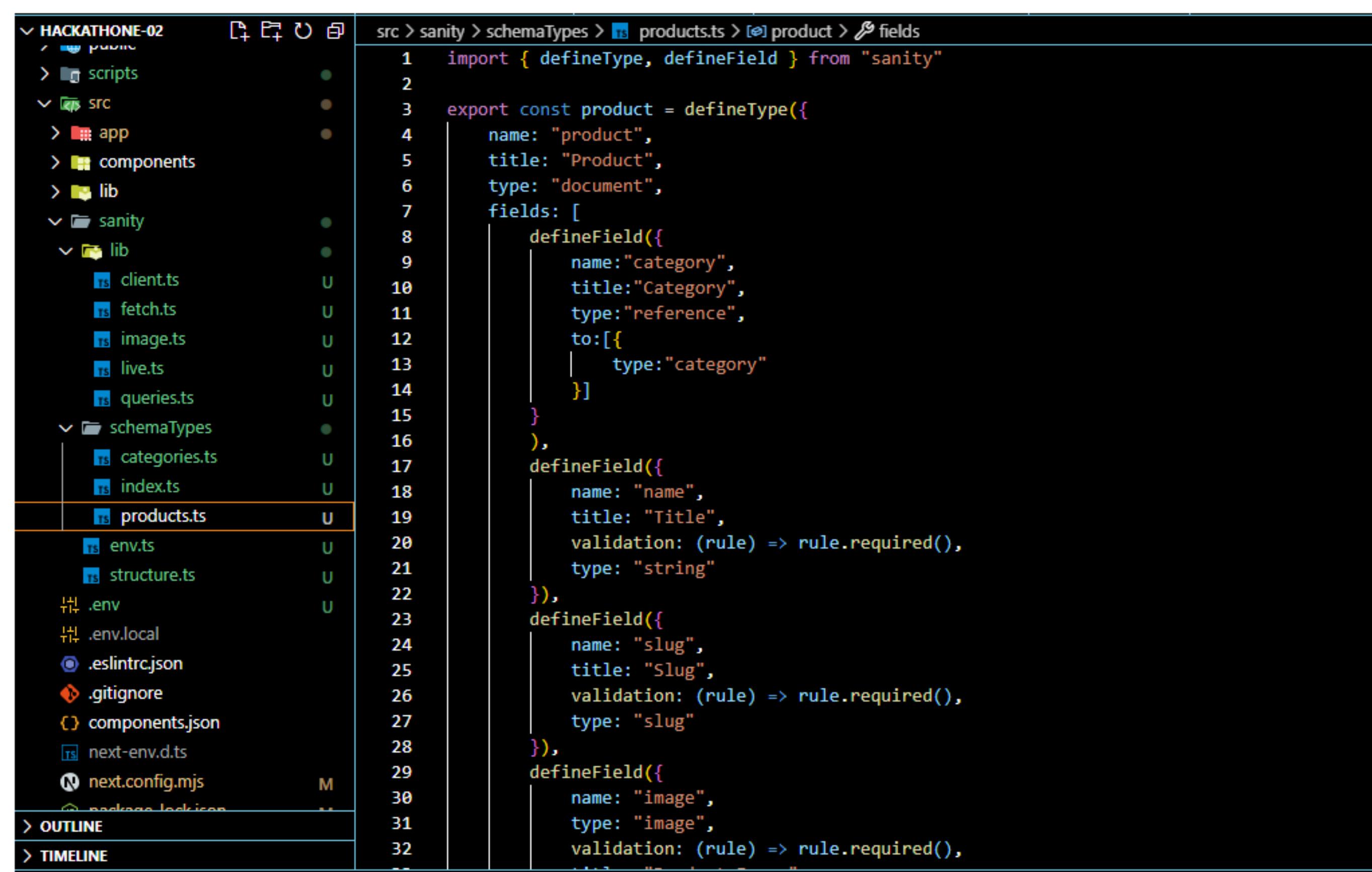
“import-data”：“node scripts/importSanityData.js” add this command in package.json file

run **npm run import-data**



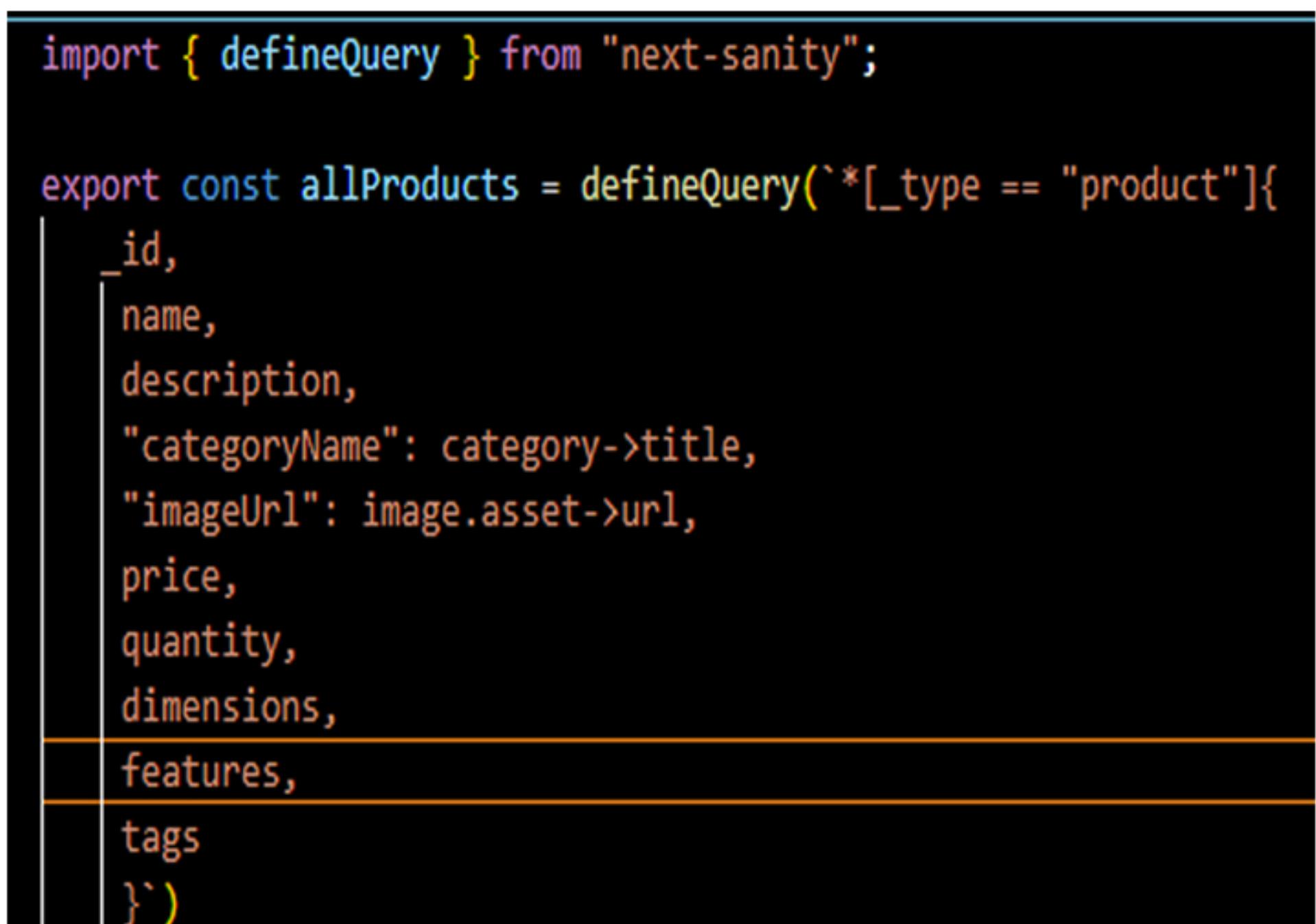
2. Adjustment made of schemas:

The Product schema defines the structure and organization of the product data in the Sanity content platform. It is designed to store comprehensive details about each product, ensuring it is versatile and fits various use cases such as e-commerce platforms or product catalogs



```
src > sanity > schemaTypes > products.ts > product > fields
1 import { defineType, defineField } from "sanity"
2
3 export const product = defineType({
4   name: "product",
5   title: "Product",
6   type: "document",
7   fields: [
8     defineField({
9       name: "category",
10      title: "Category",
11      type: "reference",
12      to: [
13        { type: "category" }
14      ]
15    }),
16    defineField({
17      name: "name",
18      title: "Title",
19      validation: (rule) => rule.required(),
20      type: "string"
21    }),
22    defineField({
23      name: "slug",
24      title: "Slug",
25      validation: (rule) => rule.required(),
26      type: "slug"
27    }),
28    defineField({
29      name: "image",
30      title: "Image",
31      validation: (rule) => rule.required(),
32    })
33  ]
34})
```

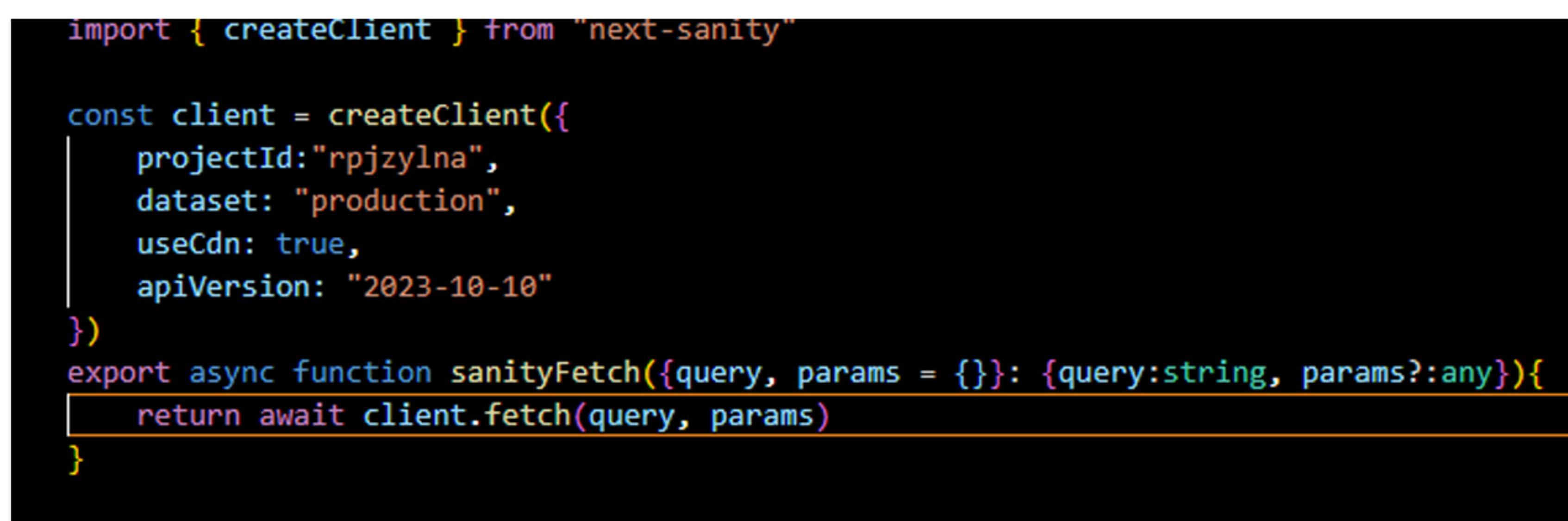
3: Migration Steps and tool used.



```
import { defineQuery } from "next-sanity";

export const allProducts = defineQuery(`*[_type == "product"]{
  id,
  name,
  description,
  "categoryName": category->title,
  "imageUrl": image.asset->url,
  price,
  quantity,
  dimensions,
  features,
  tags
})
```

The query is designed to fetch complete and well-structured product data from the Sanity backend.

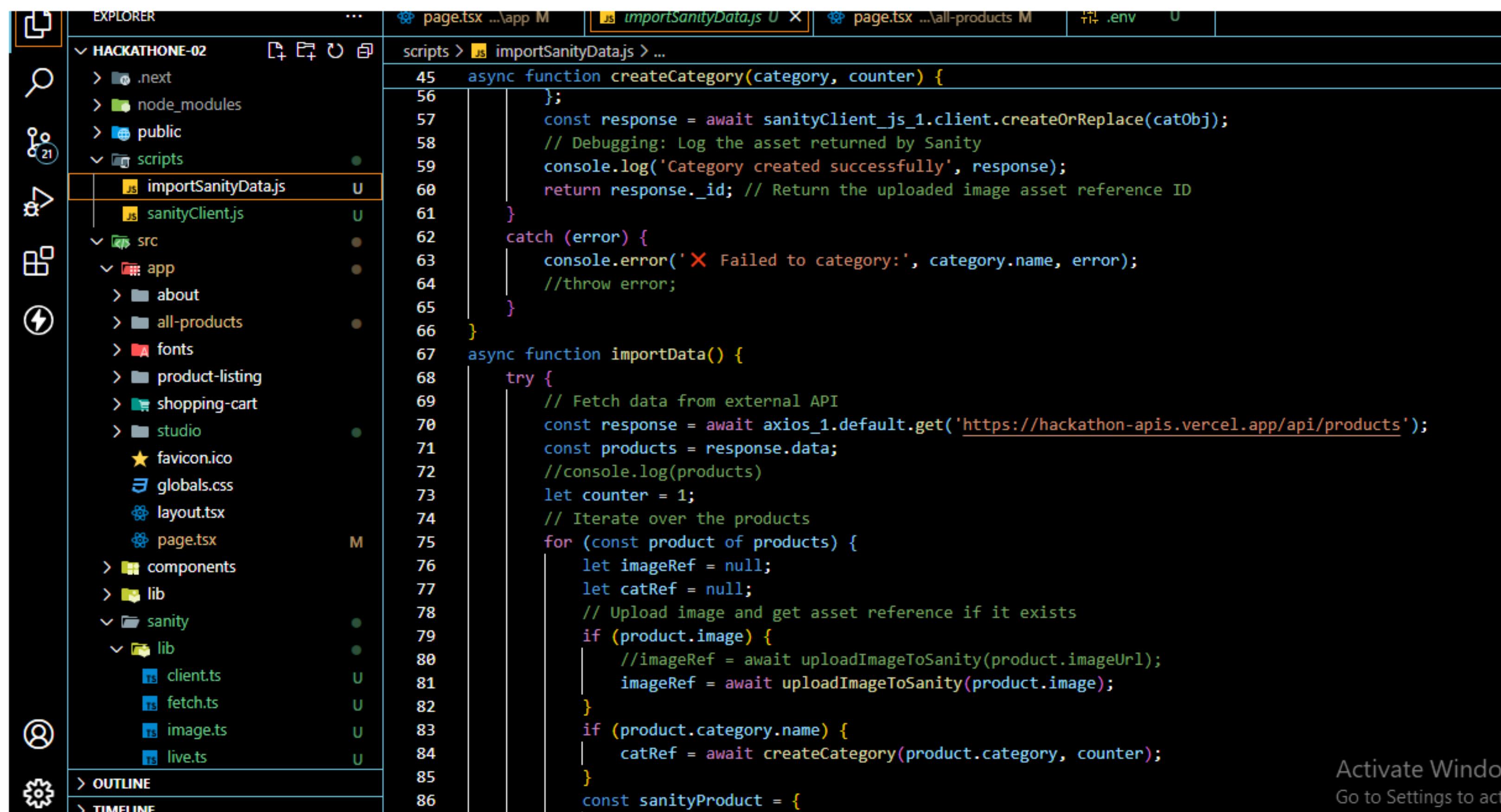


```
import { createClient } from "next-sanity"

const client = createClient({
  projectId: "rpjzylna",
  dataset: "production",
  useCdn: true,
  apiVersion: "2023-10-10"
})
export async function sanityFetch({query, params = {}}: {query:string, params?:any}){
  return await client.fetch(query, params)
}
```

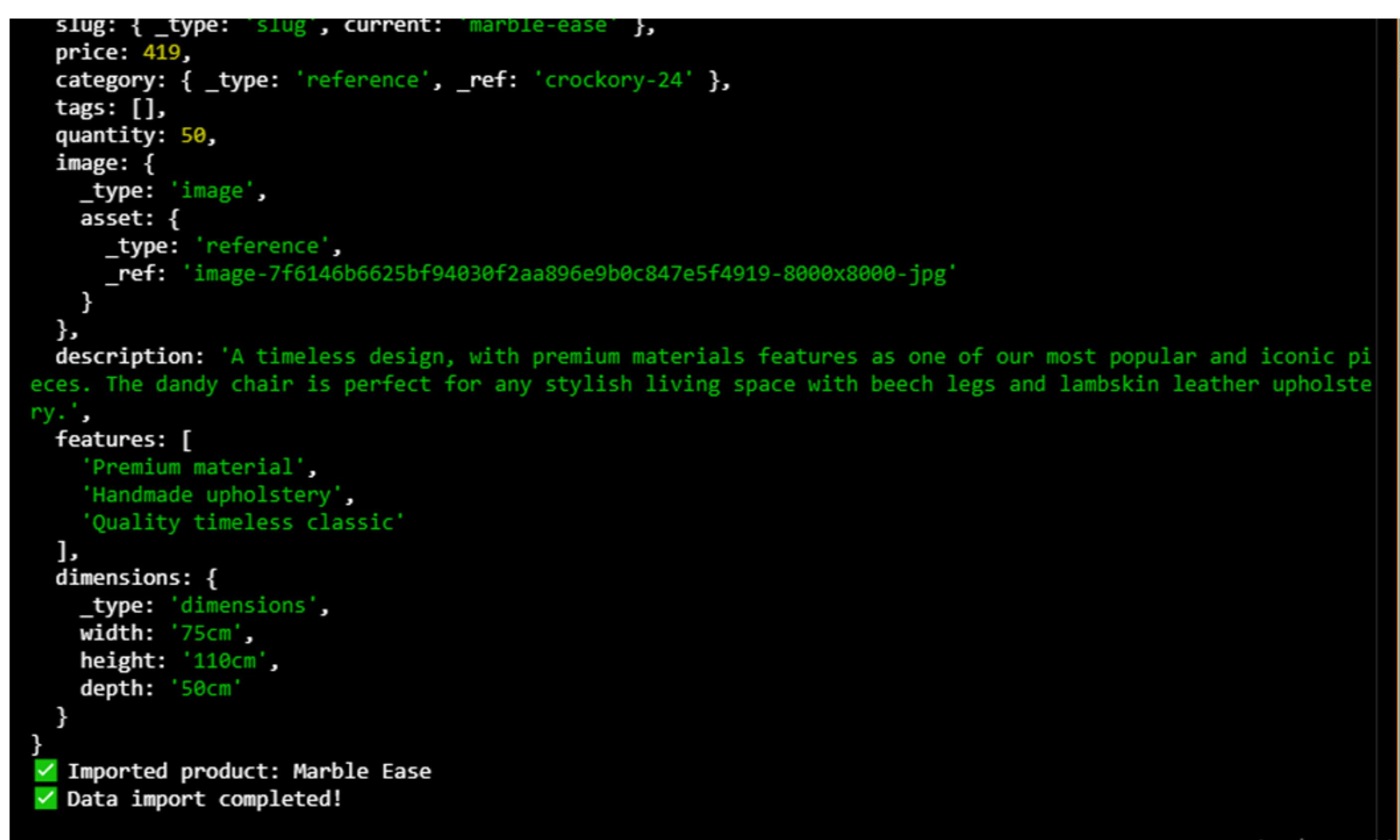
This code initializes a Sanity client using the `createClient` function from the `next-sanity` package to interact with the Sanity CMS. It connects to the project with the specified `projectId`, `dataset`, and `apiVersion`. The `sanityFetch` function is a reusable utility for querying data from Sanity by accepting a `query` string and optional `params`. It simplifies data fetching by returning the result of the `fetch` method, making it easy to retrieve and manage content dynamically in the application.

IMPORTING DATA INTO SANITY

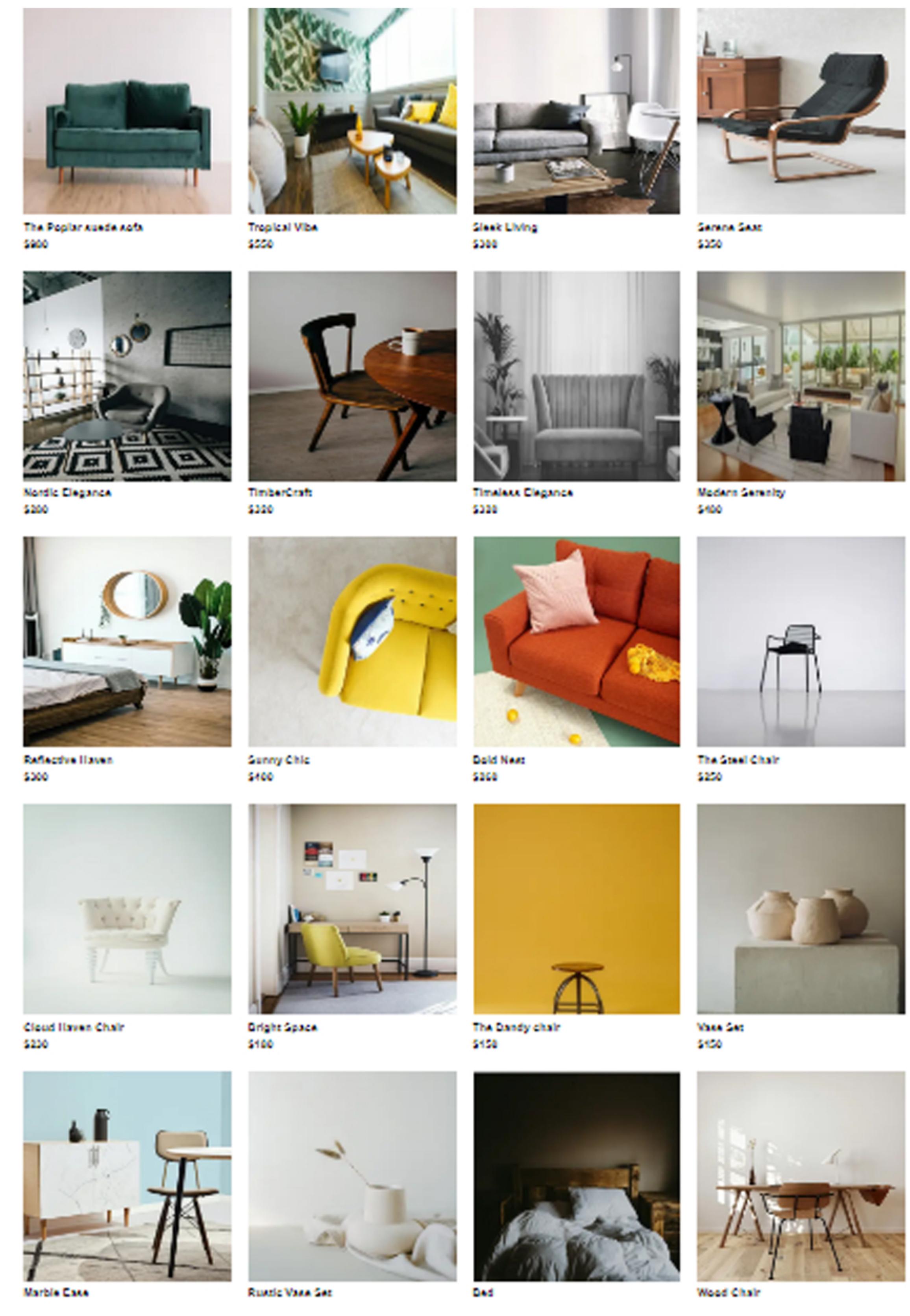


```
scripts > importSanityData.js > ...
45     }
46     const response = await sanityClient_js_1.client.createOrReplace(catObj);
47     // Debugging: Log the asset returned by Sanity
48     console.log('Category created successfully', response);
49     return response._id; // Return the uploaded image asset reference ID
50   }
51   catch (error) {
52     console.error(`Failed to category: ${category.name}, error`);
53     //throw error;
54   }
55 }
56 async function importData() {
57   try {
58     // Fetch data from external API
59     const response = await axios_1.default.get('https://hackathon-apis.vercel.app/api/products');
60     const products = response.data;
61     //console.log(products)
62     let counter = 1;
63     // Iterate over the products
64     for (const product of products) {
65       let imageRef = null;
66       let catRef = null;
67       // Upload image and get asset reference if it exists
68       if (product.image) {
69         //imageRef = await uploadImageToSanity(product.imageUrl);
70         imageRef = await uploadImageToSanity(product.image);
71       }
72       if (product.category.name) {
73         catRef = await createCategory(product.category, counter);
74       }
75       const sanityProduct = {
76         slug: { _type: 'slug', current: 'marble-ease' },
77         price: 419,
78         category: { _type: 'reference', _ref: 'crockery-24' },
79         tags: [],
80         quantity: 50,
81         image: {
82           _type: 'image',
83           asset: {
84             _type: 'reference',
85             _ref: 'image-7f6146b625bf94030f2aa896e9b0c847e5f4919-8000x8000-jpg'
86           }
87         },
88         description: 'A timeless design, with premium materials features as one of our most popular and iconic pieces. The dandy chair is perfect for any stylish living space with beech legs and lambskin leather upholstery.',
89         features: [
90           'Premium material',
91           'Handmade upholstery',
92           'Quality timeless classic'
93         ],
94         dimensions: {
95           _type: 'dimensions',
96           width: '75cm',
97           height: '110cm',
98           depth: '50cm'
99         }
100       }
101     }
102     Imported product: Marble Ease
103     Data import completed!
104   }
105 }
```

DATA SUCCESSFULLY DISPLAYED IN THE FRONTEND



```
slug: { _type: 'slug', current: 'marble-ease' },
price: 419,
category: { _type: 'reference', _ref: 'crockery-24' },
tags: [],
quantity: 50,
image: {
  _type: 'image',
  asset: {
    _type: 'reference',
    _ref: 'image-7f6146b625bf94030f2aa896e9b0c847e5f4919-8000x8000-jpg'
  }
},
description: 'A timeless design, with premium materials features as one of our most popular and iconic pieces. The dandy chair is perfect for any stylish living space with beech legs and lambskin leather upholstery.',
features: [
  'Premium material',
  'Handmade upholstery',
  'Quality timeless classic'
],
dimensions: {
  _type: 'dimensions',
  width: '75cm',
  height: '110cm',
  depth: '50cm'
}
]
✓ Imported product: Marble Ease
✓ Data import completed!
```



```
import { urlFor } from "@sanity/lib/image";
type Products = {
  _id:string;
  name:string;
  description:string;
  price:number;
  imageUrl:string
}
export default async function Allproducts() {
  const products: Products[] = await sanityFetch({query: allProducts})

  return (
    <>
      <Topbar />
      <h1 className="text-3xl text-center pt-10 px-5 py-5">View all products</h1>
      <div className="grid grid-cols-4 items-center justify-center">
        {products.map((items) => (
          <div className="m-3" key={items._id}>
            <Image src={urlFor(items.imageUrl).url()} alt="img" width={300} height={300} className="w-[300px] h-[300px]" />
            <h2 className="text-2 xl mt-2 font-bold">
              {items.name}
            </h2>
            <h3>${items.price}</h3>
            <p>{items.description}</p>
          </div>
        ))
      </div>
      <Footer />
    </>
  )
}
```

Activate Windows
Go to Settings to activate.

This code is a frontend component for displaying all products retrieved from Sanity CMS. It uses the `sanityFetch` utility to fetch product data with the `allProducts` query. The data is displayed in a grid layout, with each product showing its image, name, and price. The component also includes a hero section with promotional content and a sign-up form for newsletters. The Topbar and Footer components are used for consistent navigation and page structure, providing a user-friendly interface for viewing and interacting with the products.

Day 3 Checklist:

Self-Validation Checklist:

API Understanding: 

API Integration in Next.js: 

Schema Validation: 

Submission Preparation: 

Data Migration: 