

DAY 3

API Integration Report & Data Migration

(**NIKELY**)

1) What is An API ?

- An Application Programming Interface (API) is characterized by the following attributes:
- A Comprehensive Framework of Rules and Protocols:

An API establishes a structured approach for diverse software applications to communicate and exchange data effectively.

- An Intermediary between Applications:

It serves as a conduit that enables software systems to access functionalities and information from other systems without requiring knowledge of the internal coding structures.

- Facilitation of Data Transfer:

APIs support the transmission and reception of data in standardized formats, such as JSON or XML, ensuring compatibility and reliability.

- Accessibility via Endpoints:

APIs are accessed through designated addresses, referred to as endpoints, where requests can be submitted to obtain data or execute specific actions on a server.

- Essential for System Integration:

APIs are critical for the seamless collaboration of various software systems, exemplified by the integration of a website with a payment gateway.

Using API:

The integration process entails linking an external API that supplies product data to a Sanity CMS project. This connection facilitates efficient data migration and management, ensuring a smooth workflow in handling product information.

2) Things Needed:

- API: to fetch things from code to sanity and to Display.
- DOTENV: It ensured the secure management of environment variables pertaining to the integration process.
- AXIOS: I utilized this tool to execute HTTP requests for the purpose of interacting with the API.

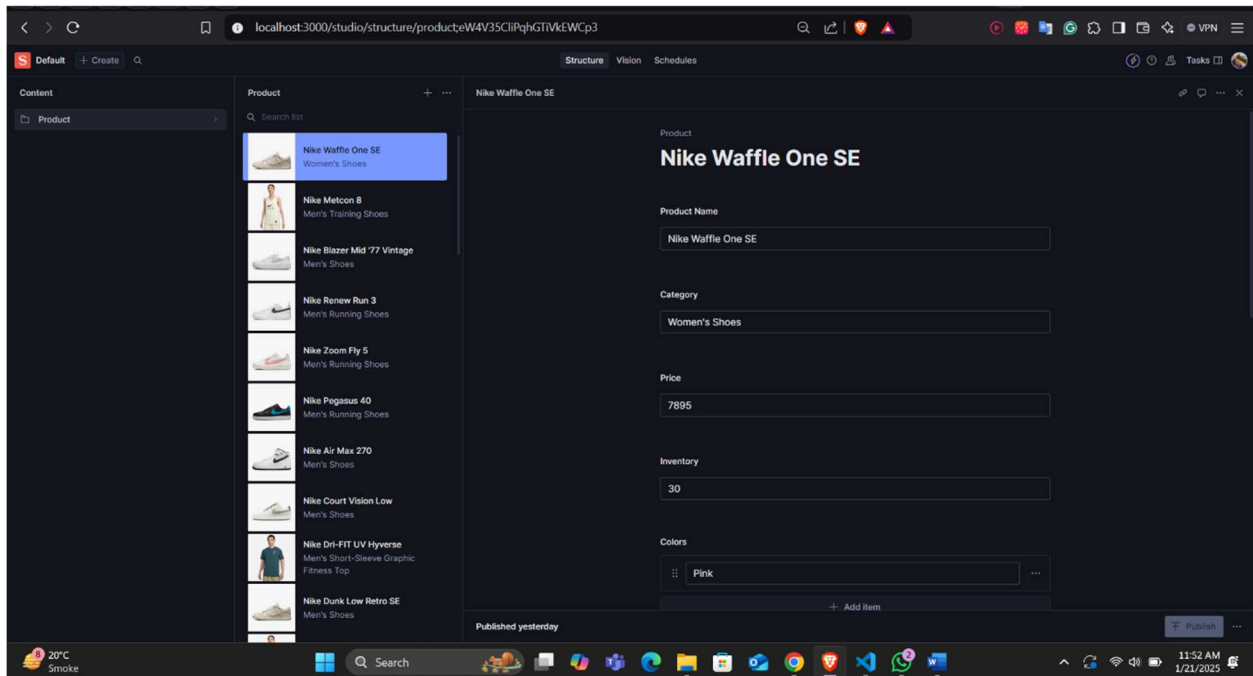
- Product Schema:

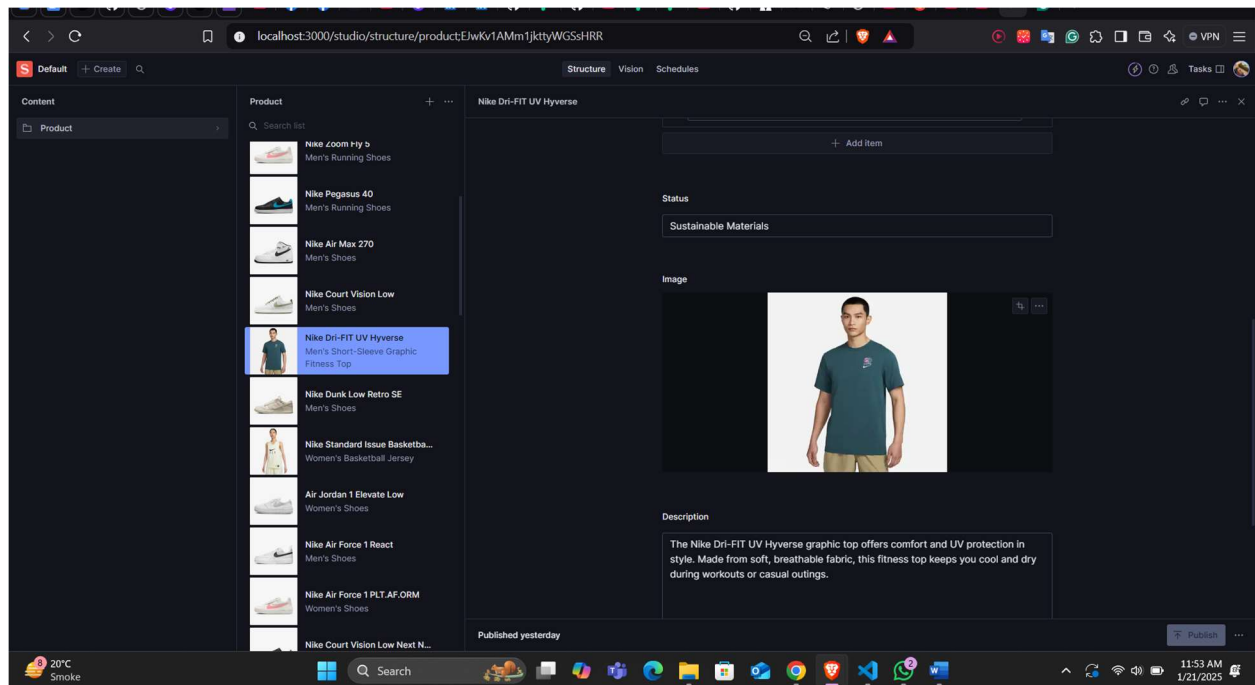
```
export const productSchema = {
  name: 'product',
  title: 'Product',
  type: 'document',
  fields: [
    {
      name: 'productName',
      title: 'Product Name',
      type: 'string',
    },
    {
      name: 'category',
      title: 'Category',
      type: 'string',
    },
    {
      name: 'price',
      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',
      // Using Sanity's image type for image field
      options: {
        hotspot: true,
      },
    },
    {
      name: 'description',
      title: 'Description',
      type: 'text',
    },
  ],
}
```

Steps for the API migration and Integration

- Install Sanity CMS first .
- Then configure these in ENV LOCAL file:
 - `NEXT_PUBLIC_SANITY_PROJECT_ID`
 - `NEXT_PUBLIC_SANITY_DATASET`
 - `SANITY_API_TOKEN`
- Configure the File for fetching and client side .

The data first will be appear on the localhost:3000/studio like this :





Then by calling the data to the Display by using sanity Fetch and by calling it in a function:

```

import { sanityFetch } from "@/sanity/lib/fetch";
import { allproducts } from "@/sanity/lib/queries";
import Image from "next/image";

type Product = {
  _id : string;
  productName: string;
  description : string;
  price : number;
  imageUrl : string;
  status:string;
  colors:string;
  category:string
}

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

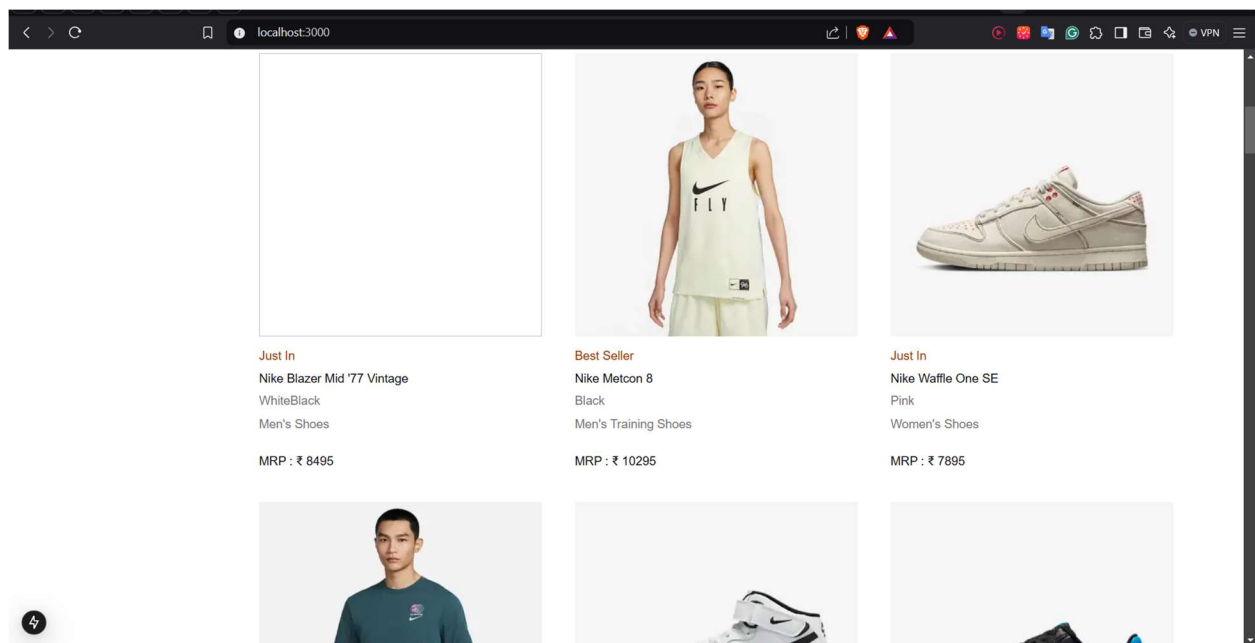
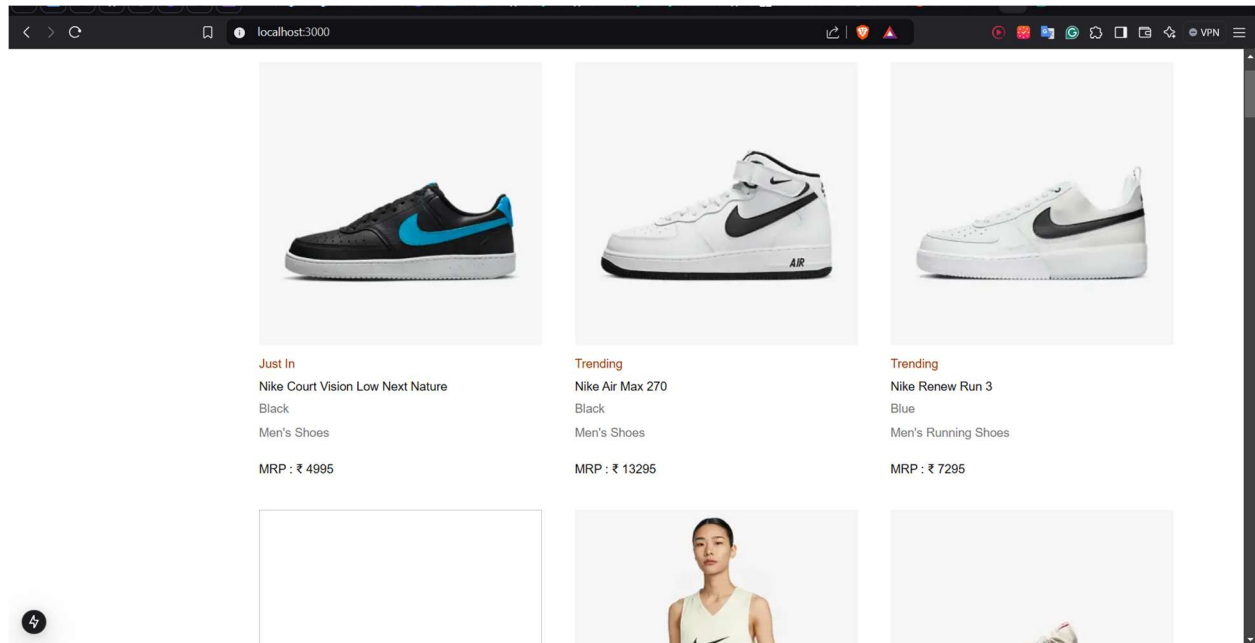
  return (
    <div className=
      "bg-backgroundw text-buttoncolor grid grid-cols-3 gap-
      -[10px] gap-y-[18px] pl-[308px] pr-[56px] pt-[142px]"
    >
      {
        products.map((product) => (
          <div className="w-[348px] h-[533px]" key={
            product._id}>
            <Image src={product.imageUrl} width={348}
            height={348} alt="" />
            <h2 className=
              "text-left text-[#9e3500] mt-[9px] font-[500px] text-
              [15px] leading-[28px]"
            >{product.status}</h2>
            <h2 className=
              "text-left font-[500px] text-[15px] leading-[28px] ">{
                product.productName}</h2>

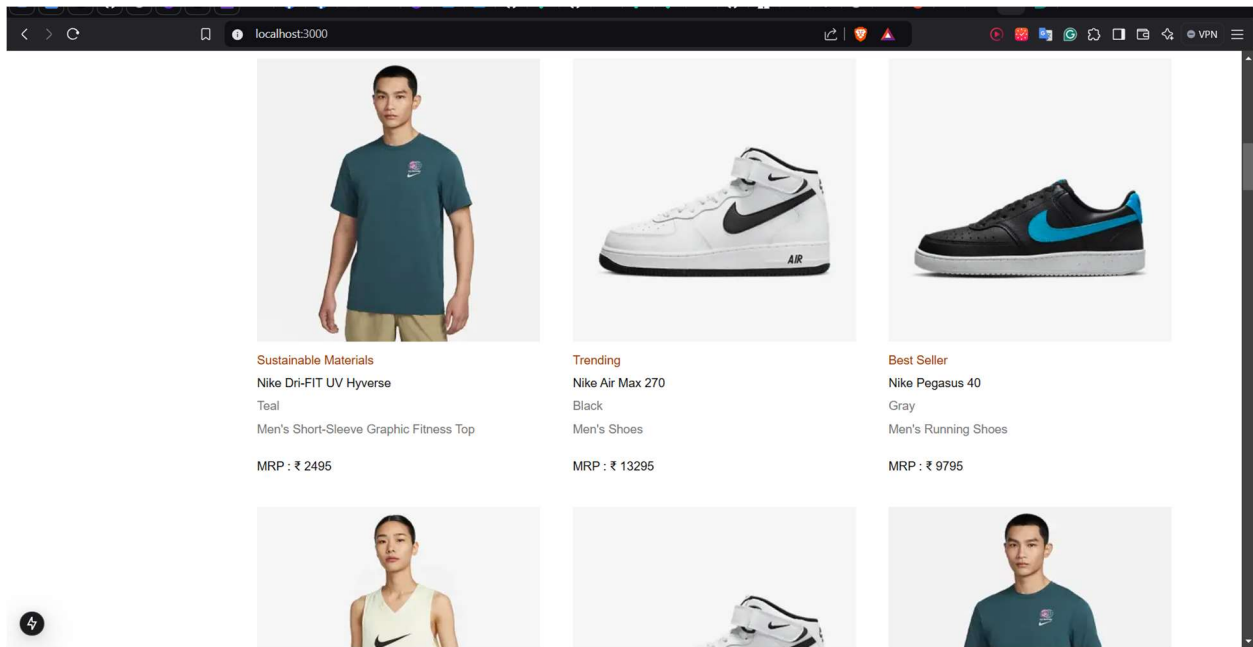
            <h2 className=
              "text-left font-[400px] text-grey75 text-[15px] leadin
              g-[24px] mt-[2px]"
            >{product.colors}</h2>
            <h2 className=
              "text-left font-[400px] text-[15px] text-grey75 leadin
              g-[24px] mt-[5px]"
            >{product.category}</h2>
            <h2 className=
              "text-left font-[500px] text-[15px] leading-[28px] mt-
              [19px]"
            >MRP : ₹ {product.price}</h2>

            </div>
          ))
        }
      </div>
    )
  }
}

```

Result in the display look like this:





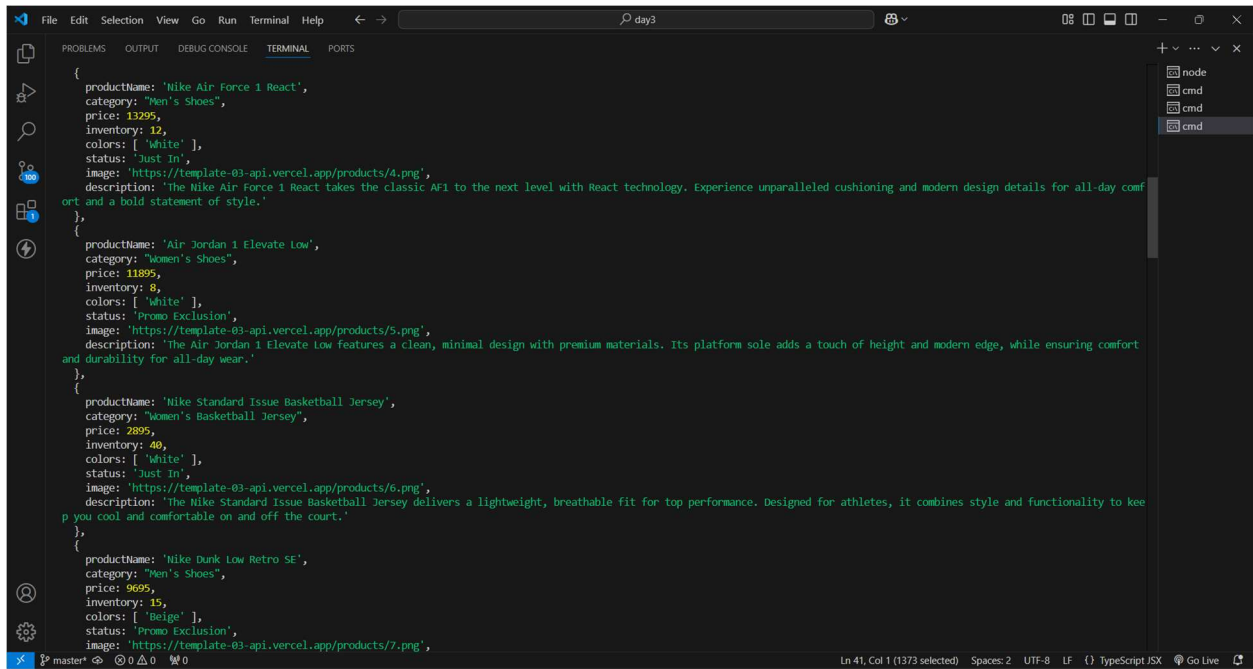
To send the images to studio so use “npm run migrate” that will be run as in some code in the terminal:

```

File Edit Selection View Go Run Terminal Help
day3
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
D:\glia\hackathon-Q2\hackathon-3\day3>npm run migrate
> day3@0.1.0 migrate
> node scripts/data-migration.mjs

migrating data please wait...
products ==> [
  {
    productName: 'Nike Air Force 1 Mid '07',
    category: 'Men's Shoes',
    price: 10795,
    inventory: 20,
    colors: [ 'White' ],
    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',
  price: 13295,
  inventory: 12,
  colors: [ 'white' ],
  status: 'Just In',
  image: 'https://template-03-api.vercel.app/products/4.png',
  description: '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.'
},
{
  productName: 'Air Jordan 1 Elevate Low',
  category: 'Women's Shoes',
  price: 11895,
  inventory: 8,
  colors: [ 'white' ],
  status: 'Promo Exclusion',
  image: 'https://template-03-api.vercel.app/products/5.png',
  description: 'The Air Jordan 1 Elevate Low features a clean, minimal design with premium materials. Its platform sole adds a touch of height and modern edge, while ensuring comfort and durability for all-day wear.'
},
{
  productName: 'Nike Standard Issue Basketball Jersey',
  category: 'Women's Basketball Jersey',
  price: 2895,
  inventory: 40,
  colors: [ 'white' ],
  status: 'Just In',
  image: 'https://template-03-api.vercel.app/products/6.png',
  description: 'The Nike Standard Issue Basketball Jersey delivers a lightweight, breathable fit for top performance. Designed for athletes, it combines style and functionality to keep you cool and comfortable on and off the court.'
},
{
  productName: 'Nike Dunk Low Retro SE',
  category: 'Men's Shoes',
  price: 9695,
  inventory: 15,
  colors: [ 'Beige' ],
  status: 'Promo Exclusion',
  image: 'https://template-03-api.vercel.app/products/7.png',
}
```

Validation Check-list:

API Understanding	API Integration In Next JS	Schema Validation	Data Migration	Submission Prepared
