DAY 3 ➡ API INTEGRATION AND DATA MIGRATION

Integrate APIs with Sanity for smooth data migration.

Day 3 -API Integration Report - Shop.Co

API Integration Process:

Step 1- API EndPoint StepUP

- API EndPoint : `https://template1-neon-nu.vercel.app/api/products`

- Structure: The API Provides ➔


```
{
    "name": "Casual Green Bomber Jacket",
    "description": "This stylish green bomber jacket offers a sleek and
modern twist on a classic design. Made from soft and comfortable fabric, it
features snap buttons and ribbed cuffs, giving it a sporty yet refined look.
The minimalist style makes it perfect for layering over casual t-shirts or
hoodies. Whether you're out with friends or just lounging, this jacket
provides a laid-back yet fashionable vibe. Its muted green color adds a
subtle, earthy tone that pairs well with a variety of outfits, making it a
versatile addition to your casual wardrobe.",
    "price": 300,
    "isNew": true,
    "colors": [
      "Blue",
      "Red",
      "Black",
      "Yellow"
    ],
    "sizes": [
      "S",
      "XXL",
      "XL",
      "L"
    ],
    "_id": "0dc7c847-8599-45d0-b02c-34429f7a639e",
    "imageUrl":
"https://cdn.sanity.io/images/7xt4qcah/production/4e2ed6a9eaa6e1413843e53f311
3ccfd2104c301-278x296.png",
    "category": "hoodie",
    "discountPercent": 20
  },
```


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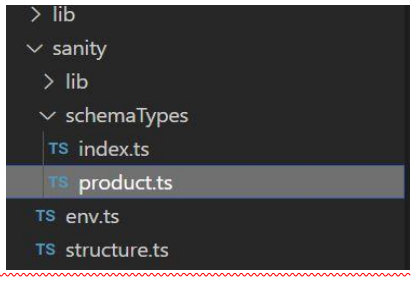
- Library : **Axios** is a promise-based JavaScript library that simplifies making HTTP requests, enabling efficient data fetching and sending to APIs.

Step 2- Fetch Data API:

```
async function importProducts() {
  try {
    const response = await fetch('https://template1-neon-
nu.vercel.app/api/products');

    if (!response.ok) {
      throw new Error(`HTTP error! Status:
${response.status}`);
    }

    const products = await response.json();

    for (const product of products) {
      await uploadProduct(product);
    }
  } catch (error) {
    console.error('Error fetching products:', error);
  }
}
```

- The API call retrieves an array of product object from endpoint , ensuring proper data serialization.

Step 2- Make Schema:



```
import { defineType } from "sanity";

export default defineType({
  name: "products",
  title: "Products",
  type: "document",
  fields: [
    {
      name: "name",
      title: "Name",
      type: "string",
    },
    {
      name: "price",
      title: "Price",
      type: "number",
    },
    {
      name: "description",
      title: "Description",
      type: "text",
    },
    {
      name: "image",
      title: "Image",
      type: "image",
    },
    {
      name: "category",
      title: "Category",
      type: "string",
      options: {
        list: [
          { title: "T-Shirt", value: "tshirt" },
          { title: "Short", value: "short" },
          { title: "Jeans", value: "jeans" },
          { title: "Hoddie", value: "hoodie" },
          { title: "Shirt", value: "shirt" },
        ],
      },
    },
    {
      name: "discountPercent",
      title: "Discount Percent",
      type: "number",
    },
    {
      name: "new",
      type: "boolean",
      title: "New",
    },
    {
      name: "colors",
      title: "Colors",
      type: "array",
      of: [{ type: "string" }],
    },
    {
      name: "sizes",
      title: "Sizes",
      type: "array",
      of: [{ type: "string" }],
    },
  ],
});
```

Step 3-Migration Steps and Tool Used

1.Environment Setup:

-Installed required dependencies: `@sanity/client`, `axios`, `dotenv`.
-Create a `.env.local` file to securely store enivronment variables.

2.Data Fetching:

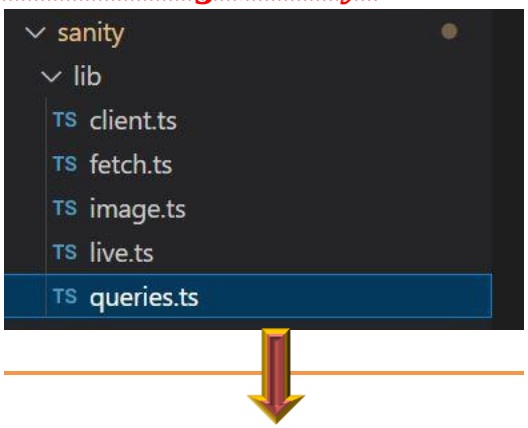
-Retrieved product data from the API endpoint using Axios.
-Parsed and logged the data to confirm its structure and integrity.

3.Image Upload:

- Downloaded images from the API's `image` field using Axios.
-Uploading images to sanity asset Manger using the Sanity Client.

```
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}`);
    return asset._id;
  } catch (error) {
    console.error('Failed to upload image:', imageUrl, error);
    return null;
}}
```

Step 4-We Fetch the API Through Sanity:




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

export const allproducts = defineQuery(`
    *[_type == "products"]{
    _id,
    name,
    price,
    description,
    category,
    discountPercent,
    new,
    colors,
    sizes,
    "imageUrl": image.asset->url
    }
`)
```

RESULT

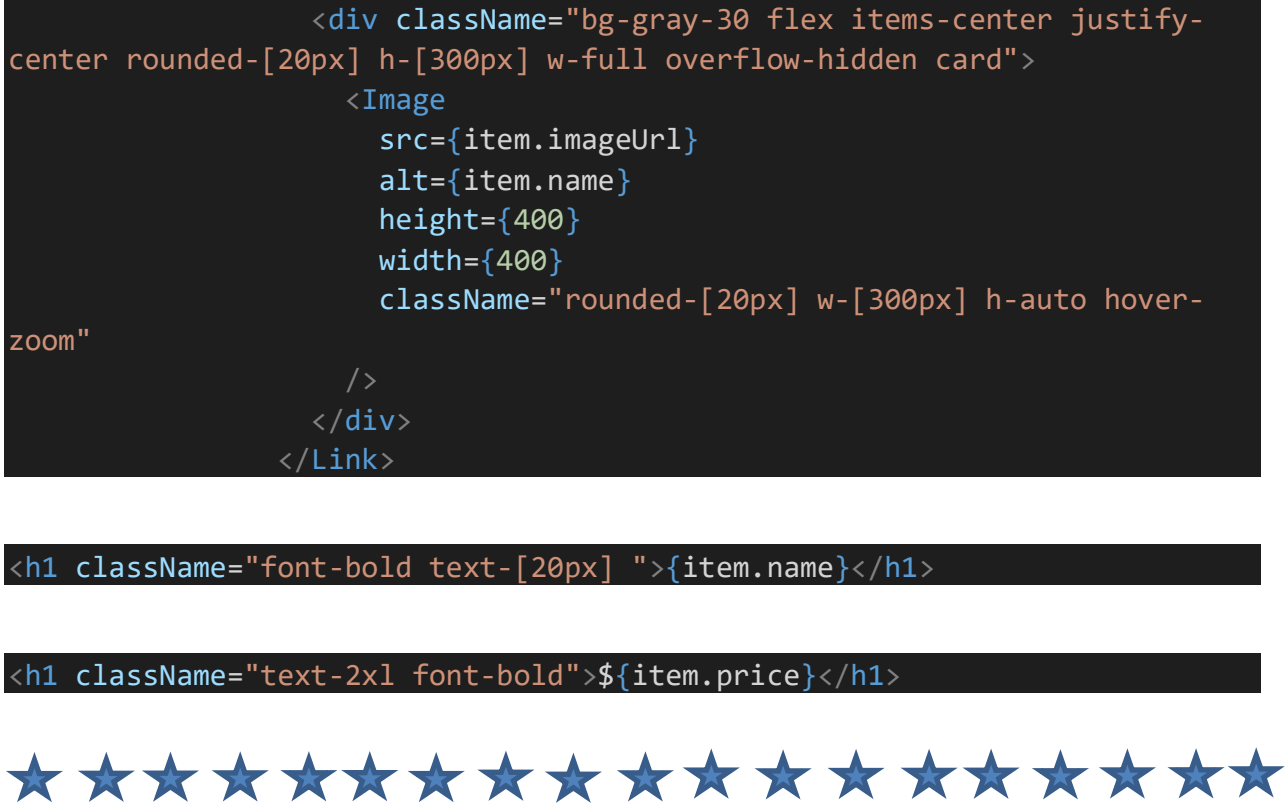

```
[
  {
    _id: 'EJwKv1AMm1jkttyWGSal3t',
    new: null,
    sizes: [ 'L', 'XL', 'S', 'XXL' ],
    discountPercent: 0,
    colors: [ 'Green', 'Blue', 'Yellow', 'Red' ],
    imageUrl: 'https://cdn.sanity.io/images/cl7x1dq0/production/701cf9bdf7e58564aae72eb5b76896f02a1d4115-295x298.png',
    name: 'Gradient Graphic T-shirt',
    price: 145,
    description: 'Add a bold and artistic touch to your wardrobe with this unique graphic t-shirt. Featuring an eye-catch
ing abstract swirl design in vibrant colors, it exudes energy and individuality. The "Just Walk Forward" slogan adds a mo
tivational element, making this tee perfect for those who love to express themselves.\n' +
      '\n' +
      'Key Features:\n' +
      '\n' +
      'High-quality fabric for ultimate comfort and durability\n' +
      'Modern, unisex design suitable for casual outings or statement looks\n' +
      'Relaxed fit with a classic crew neckline\n' +
      'Unique printed details for a one-of-a-kind style\n' +
      'Pair it with jeans, joggers, or shorts to create a standout look!',
    category: 'tshirt'
  },
  {
    description: 'These classic black jeans offer a versatile and timeless addition to any wardrobe. Featuring a straight
-leg cut, they provide a comfortable, flattering fit for various body types. Crafted from durable denim, these jeans are
both stylish and practical, perfect for both casual outings and semi-formal occasions. The clean, dark black color adds a
 sleek and sophisticated touch, making them easy to pair with any top, from t-shirts to shirts or hoodies. With their cla
ssic design and premium fit, these black jeans are a must-have staple for any wardrobe.',
    category: 'jeans',
    discountPercent: 16,
    new: null,
    sizes: [ 'XXL', 'XL', 'L', 'S' ],
    _id: 'EJwKv1AMm1jkttyWGSal59',
    name: 'Classic Black Straight-Leg Jeans',
    price: 170,
    imageUrl: 'https://cdn.sanity.io/images/cl7x1dq0/production/b2264d466c3c96f8ae3f1192a2f73ac313221576-183x275.jpg',
    colors: [ 'Green', 'Blue', 'Yellow', 'Red' ]
```

Step 5-Display on Front-end:

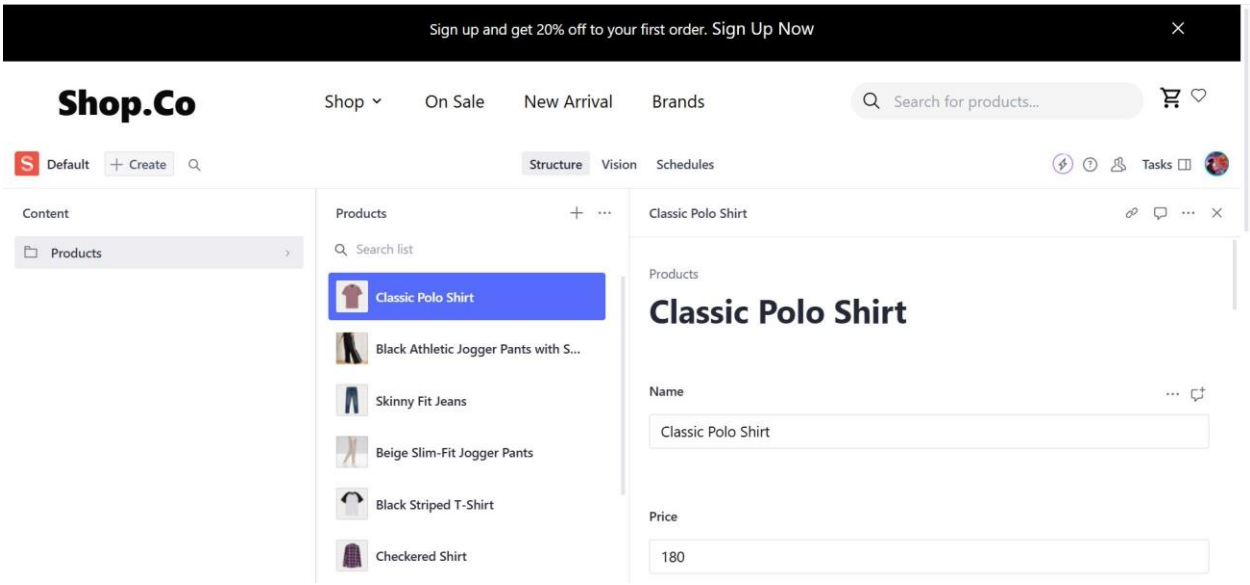
```
 <Link href={`/product/${item._id}`}>
                  <div className="bg-gray-30 flex items-center justify-
center rounded-[20px] h-[300px] w-full overflow-hidden card">
                    <Image
                      src={item.imageUrl}
                      alt={item.name}
                      height={400}
                      width={400}
                      className="rounded-[20px] w-[300px] h-auto hover-
zoom"
                    />
                  </div>
                </Link>
```

```
<h1 className="font-bold text-[20px] ">{item.name}</h1>
```

```
<h1 className="text-2xl font-bold">${item.price}</h1>
```



NOW IN SANITY:



✅ Day 3 Checklist

✅ *Self-Validation Checklist*

- **API Understanding**
  ✔ *Completed*
- **Schema Validation**
  ✔ *Completed*
- **Data Migration**
  ✔ *Completed*
- **API Integration in Next.js**
  ✔ *Completed*
- **Submission Preparation**
  ✔ *Completed*
