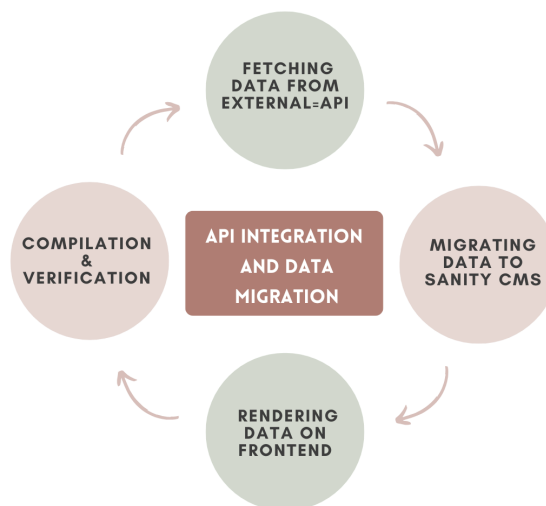

Day 3 – API Integration Report for Shop.co

1. Introduction

This report outlines the integration process of product and category data from an external API into the backend system of **Shop.co**, a clothing e-commerce platform. The integration leverages **Sanity CMS** for content management and **Next.js** for frontend rendering.

The main objectives of this integration were:

1. Fetching data from an external API.
2. Storing and managing the data in Sanity CMS.
3. Displaying the fetched data dynamically on the frontend.



2. API Integration Process

Step 1: Fetching Data from API

The API provided the following endpoints:

- **Products Endpoint:** Includes details such as titles, prices, descriptions, categories, inventory, and images.

Base API URL:

<https://template1-neon-nu.vercel.app/api/products>

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

Console Output:

```

    -id: '78130000000000000000'
    -rev: '78130000000000000000'
    -type: 'product'
    -updatedAt: '2023-01-18T19:14:03Z'
    category: 'hoodie'
    description: 'This stylish green hoodie offers a sleek and modern twist on a classic design. Made from soft and comfortable fabric, it features snap buttons at the cuffs and hem, perfect for casual outings or just lounging. This hoodie provides a laid-back yet fashionable vibe. Its muted green color adds a subtle, earthy tone that pairs well with a variety of styles.'
    discountPercent: 20,
    image: {
      -type: 'image',
      asset: {
        -ref: 'image-4b260460e4d13043e53f7f113ecf218a7301-278x290.png'
      }
    },
    isNew: true,
    name: 'Casual Green Hoodie Jacket',
    price: 380
  }
  uploading Image: https://cdn.sanity.io/images/7xt4qcab/production/4b260460e4d13043e53f7f113ecf218a7301-278x290.png
  Image uploaded successfully: image-4b260460e4d13043e53f7f113ecf218a7301-278x290.png
  Product Classic White Pullover Hoodie uploaded successfully: {
    -createdAt: '2023-01-18T19:14:03Z',
    -id: '78130000000000000000',
    -rev: '78130000000000000000',
    -type: 'product',
    -updatedAt: '2023-01-18T19:14:03Z',
    category: 'hoodie',
    description: 'This white pullover hoodie offers a clean, minimalist look with its soft fabric and timeless design. The hoodie features a cozy, spacious fit, complete with a kangaroo pocket and ribbed cuffs and hem. Perfect for casual outings or as a part of an everyday outfit, this hoodie provides a comfortable and stylish option for your wardrobe.'
    discountPercent: 10,
    image: {
      -type: 'image',
      asset: {
        -ref: 'image-4b3f4804b8b0d97e412c97e6835e4196d8a76e-183x262.jpg'
      }
    },
    isNew: false,
    name: 'Classic White Pullover Hoodie',
    price: 150
  }
  uploading Image: https://cdn.sanity.io/images/7xt4qcab/production/781c780d7f5856a4a72eb07689642a1d115-290x290.png
  Image uploaded successfully: image-781c780d7f5856a4a72eb07689642a1d115-290x290.png
  Product Gradient Graphic T-shirt uploaded successfully: {
    -createdAt: '2023-01-18T19:14:03Z',
    -id: '78130000000000000000',
    -rev: '78130000000000000000',
    -type: 'product',
    -updatedAt: '2023-01-18T19:14:03Z',
    category: 't-shirt',
    description: 'Add a bold and artistic touch to your wardrobe with this unique graphic t-shirt. Featuring an eye-catching abstract swirl design in vibrant colors, it's perfect for making a statement. The t-shirt is made from soft, breathable fabric and has a classic crew neck and short sleeves. Pair it with jeans, joggers, or shorts to create a standout look!'
    discountPercent: 0,
    image: {
      -type: 'image',
      asset: {
        -ref: 'image-781c780d7f5856a4a72eb07689642a1d115-290x290.png'
      }
    },
    isNew: true,
    name: 'Gradient Graphic T-shirt',
    price: 145
  }
  uploading Image: https://cdn.sanity.io/images/7xt4qcab/production/62260460e4c36f8ae3f1192ac31221756-183x275.jpg
  Image uploaded successfully: image-62260460e4c36f8ae3f1192ac31221756-183x275.jpg
  Product Classic Black Stratch-leg Jeans uploaded successfully: {
    -createdAt: '2023-01-18T19:14:03Z',
    -id: '78130000000000000000',
    -rev: '78130000000000000000',
    -type: 'product',
    -updatedAt: '2023-01-18T19:14:03Z',
    category: 'jeans',
    description: 'These classic black stratch-leg jeans are a wardrobe staple. Made from durable denim, they feature a straight-leg fit and a comfortable waistband. The jeans are finished with a subtle texture and a classic five-pocket design. Pair them with a white t-shirt or a button-down shirt for a timeless look.'
    discountPercent: 0,
    image: {
      -type: 'image',
      asset: {
        -ref: 'image-781c780d7f5856a4a72eb07689642a1d115-290x290.png'
      }
    },
    isNew: true,
    name: 'Classic Black Stratch-leg Jeans',
    price: 145
  }
  uploading Image: https://cdn.sanity.io/images/7xt4qcab/production/62260460e4c36f8ae3f1192ac31221756-183x275.jpg
  Image uploaded successfully: image-62260460e4c36f8ae3f1192ac31221756-183x275.jpg
  Product Classic Black Stratch-leg Jeans uploaded successfully: {
    -createdAt: '2023-01-18T19:14:03Z',
    -id: '78130000000000000000',
    -rev: '78130000000000000000',
    -type: 'product',
    -updatedAt: '2023-01-18T19:14:03Z',
    category: 'jeans',
    description: 'These classic black stratch-leg jeans are a wardrobe staple. Made from durable denim, they feature a straight-leg fit and a comfortable waistband. The jeans are finished with a subtle texture and a classic five-pocket design. Pair them with a white t-shirt or a button-down shirt for a timeless look.'
    discountPercent: 0,
    image: {
      -type: 'image',
      asset: {
        -ref: 'image-781c780d7f5856a4a72eb07689642a1d115-290x290.png'
      }
    },
    isNew: true,
    name: 'Classic Black Stratch-leg Jeans',
    price: 145
  }
  uploading Image: https://cdn.sanity.io/images/7xt4qcab/production/62260460e4c36f8ae3f1192ac31221756-183x275.jpg
  Image uploaded successfully: image-62260460e4c36f8ae3f1192ac31221756-183x275.jpg
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    -id: '78130000000000000000',
    -rev: '78130000000000000000',
    -type: 'product',
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    description: 'These classic black stratch-leg jeans are a wardrobe staple. Made from durable denim, they feature a straight-leg fit and a comfortable waistband. The jeans are finished with a subtle texture and a classic five-pocket design. Pair them with a white t-shirt or a button-down shirt for a timeless look.'
    discountPercent: 0,
    image: {
      -type: 'image',
      asset: {
        -ref: 'image-781c780d7f5856a4a72eb07689642a1d115-290x290.png'
      }
    },
    isNew: true,
    name: 'Classic Black Stratch-leg Jeans',
    price: 145
  }
  uploading Image: https://cdn.sanity.io/images/7xt4qcab/production/62260460e4c36f8ae3f1192ac31221756-183x275.jpg
  Image uploaded successfully: image-62260460e4c36f8ae3f1192ac31221756-183x275.jpg
  Product Classic Black Stratch-leg Jeans uploaded successfully: {
    -createdAt: '2023-01-18T19:14:03Z',
    -id: '78130000000000000000',
    -rev: '78130000000000000000',
    -type: 'product',
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    category: 'jeans',
    description: 'These classic black stratch-leg jeans are a wardrobe staple. Made from durable denim, they feature a straight-leg fit and a comfortable waistband. The jeans are finished with a subtle texture and a classic five-pocket design. Pair them with a white t-shirt or a button-down shirt for a timeless look.'
    discountPercent: 0,
    image: {
      -type: 'image',
      asset: {
        -ref: 'image-781c780d7f5856a4a72eb07689642a1d115-290x290.png'
      }
    },
    isNew: true,
    name: 'Classic Black Stratch-leg Jeans',
    price: 145
  }
  uploading Image: https://cdn.sanity.io/images/7xt4qcab/production/62260460e4c36f8ae3f1192ac31221756-183x275.jpg
  Image uploaded successfully: image-62260460e4c36f8ae3f1192ac31221756-183x275.jpg
  Product Classic Black Stratch-leg Jeans uploaded successfully: {
    -createdAt: '2023-01-18T19:14:03Z',
    -id: '78130000000000000000',
    -rev: '78130000000000000000',
    -type: 'product',
    -updatedAt: '2023-01-18T19:14:03Z',
    category: 'jeans',
    description: 'These classic black stratch-leg jeans are a wardrobe staple. Made from durable denim, they feature a straight-leg fit and a comfortable waistband. The jeans are finished with a subtle texture and a classic five-pocket design. Pair them with a white t-shirt or a button-down shirt for a timeless look.'
    discountPercent: 0,
    image: {
      -type: 'image',
      asset: {
        -ref: 'image-781c780d7f5856a4a72eb07689642a1d115-290x290.png'
      }
    },
    isNew: true,
    name: 'Classic Black Stratch-leg Jeans',
    price: 145
  }
  uploading Image: https://cdn.sanity.io/images/7xt4qcab/production/62260460e4c36f8ae3f1192ac31221756-183x275.jpg
  Image uploaded successfully: image-62260460e4c36f8ae3f1192ac31221756-183x275.jpg
  Product Classic Black Stratch-leg Jeans uploaded successfully: {
    -createdAt: '2023-01-18T19:14:03Z',
    -id: '78130000000000000000',
    -rev: '78130000000000000000',
    -type: 'product',
    -updatedAt: '2023-01-18T19:14:03Z',
    category: 'jeans',
    description: 'These classic black stratch-leg jeans are a wardrobe staple. Made from durable denim, they feature a straight-leg fit and a comfortable waistband. The jeans are finished with a subtle texture and a classic five-pocket design. Pair them with a white t-shirt or a button-down shirt for a timeless look.'
    discountPercent: 0,
    image: {
      -type: 'image',
      asset: {
        -ref: 'image-781c780d7f5856a4a72eb07689642a1d115-290x290.png'
      }
    },
    isNew: true,
    name: 'Classic Black Stratch-leg Jeans',
    price: 145
  }
  uploading Image: https://cdn.sanity.io/images/7xt4qcab/production/62260460e4c36f8ae3f1192ac31221756-183x275.jpg
  Image uploaded successfully: image-62260460e4c36f8ae3f1192ac31221756-183x275.jpg
  Product Classic Black Stratch-leg Jeans uploaded successfully: {
    -createdAt: '2023-01-18T19:14:03Z',
    -id: '78130000000000000000',
    -rev: '78130000000000000000',
    -type: 'product',
    -updatedAt: '2023-01-18T19:14:03Z',
    category: 'jeans',
    description: 'These classic black stratch-leg jeans are a wardrobe staple. Made from durable denim, they feature a straight-leg fit and a comfortable waistband. The jeans are finished with a subtle texture and a classic five-pocket design. Pair them with a white t-shirt or a button-down shirt for a timeless look.'
    discountPercent: 0,
    image: {
      -type: 'image',
      asset: {
        -ref: 'image-781c780d7f5
```

Step 2: Migrating Data to Sanity CMS

The fetched data was structured and stored in Sanity CMS using its **JavaScript client library**. The product schema was updated to include additional fields for more detailed data management.

Key Schema Fields:

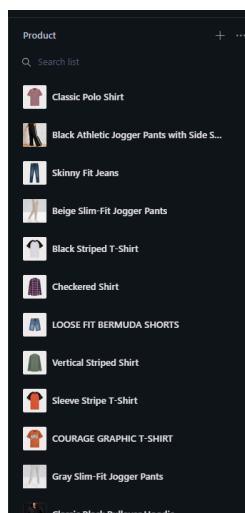
- **title:** Name of the product.
- **priceWithoutDiscount:** Original price before any discounts.
- **badge:** Promotional labels such as "Sale" or "New Arrival".
- **category:** References the category associated with the product.
- **image:** Image URL for the product.
- **inventory:** Stock level of the product.
- **tags:** Tags like "Featured" or "Trending" for categorization.

```

JS importData.js > uploadProduct
1  import { createClient } from '@sanity/client'; 324.2k (gzipped: 85.4k)
2
3  const client = createClient({
4    projectId: 'f21lx1r0',
5    dataset: 'production',
6    useCdn: true,
7    apiVersion: '2025-01-13',
8    token: 'sk8VT4P0v1bnfpM7Zs1hBywahJdK02droM0cTgpkb5iGB7AaRrbQQ6L7AuEuSXj8xxpDyRXJE7L
9  });
10
11  async function uploadImageToSanity(imageUrl) {
12    try {
13      console.log(`Uploading image: ${imageUrl}`);
14
15      const response = await fetch(imageUrl);
16      if (!response.ok) {
17        throw new Error(`Failed to fetch image: ${imageUrl}`);
18      }
19
20      const buffer = await response.arrayBuffer();
21      const bufferImage = Buffer.from(buffer);
22
23      const asset = await client.assets.upload('image', bufferImage, {
24        filename: imageUrl.split('/').pop(),
25      });
26
27      console.log(`Image uploaded successfully: ${asset._id}`);
28      return asset._id;
29    } catch (error) {
30      console.error('Failed to upload image:', imageUrl, error);
31      return null;
32    }
33  }
34
35  async function uploadProduct(product) {

```

Sanity Dashboard Screenshot Where Our Products is stored:



3. Frontend Integration

Step 3: Rendering Data on Frontend

The next step was to fetch the stored data from Sanity CMS and display it on the **Shop.co** frontend. Using **Next.js**, the fetched data was dynamically rendered into the product listing UI.

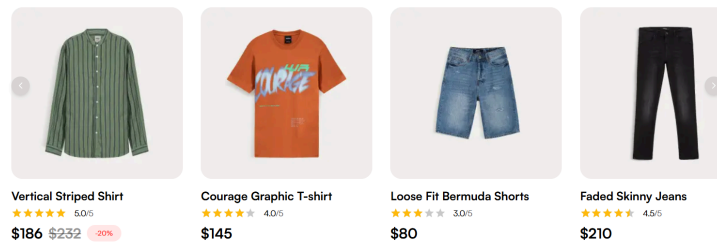
Code Example for Fetching Data in Frontend:

```
export async function GET() {  
  const data = await client.fetch(`  
    *[_type=="products"]{  
      _id,  
      name,  
      description,  
      price,  
      "imageUrl" : image.asset->url,  
      category,  
      discountPercent,  
      "isNew": new,  
      colors,  
      sizes  
    }  
  `);  
  return NextResponse.json(data);  
}
```

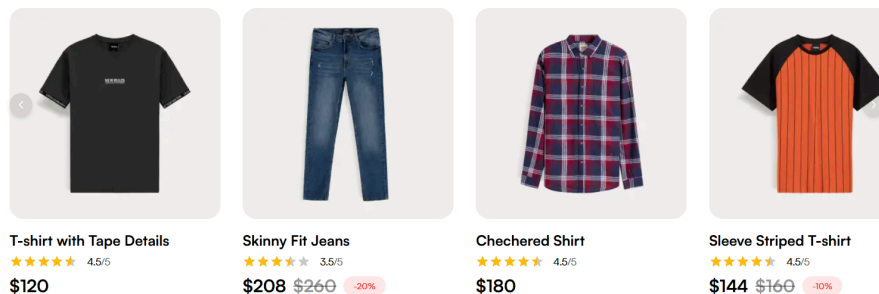
Product Display :

Below is a screenshot of the product listing page, showing products dynamically rendered on the frontend:

TOP SELLING

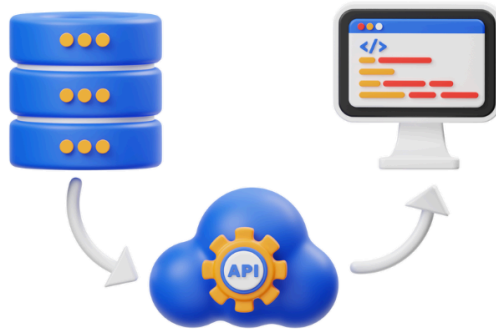


NEW ARRIVALS



4. Conclusion

The API integration for **Shop.co** was successfully completed. The process included fetching data, storing it in Sanity CMS, and rendering it dynamically on the frontend. Screenshots attached validate the successful implementation at every step. This integration ensures that product and category management is streamlined, providing a seamless experience for both administrators and users.



Documentation Author: Aleema Khan
Slot: (Saturday 2 to 5)
Task Given By : Sir Ameen Alam
Class Teacher : Sir Muhammad Bilal &
Sir Ali Aftab Sheikh