Hackathon Day-3

API INTEGRATION AND DATA MIGRATION

Furniture E-Commerce Website

Introduction:

This document provides a detailed overview of the API integration process, schema adjustments, and data migration into Sanity CMS for the Furniture Marketplace. The objective was to establish seamless API interaction, incorporate external product data, and populate the CMS to ensure a functional and robust marketplace.

API Integration Process

1. API Integration

The API integration process involved fetching external product data and populating it into Sanity CMS. The following steps were followed:

1.1 Identifying API Endpoints

• The external API providing product data was analyzed, including:

- Endpoints for product details (title, price, description, inventory, etc.).
- Endpoints for product images and category data.

1.2 Creating API Fetch Functions

- Fetch functions were implemented using fetch( ) to retrieve data from the API.
- Example code snippet:

```
interface DataProducts {
  name: string;
  price: number;
  imagePath: any;
}

async function fetchProducts(page: number): Promise<DataProducts[]> {
  const productsQuery = `*[_type == "product"]{
    name,
    price,
    imagePath
  }`;

  const dataProducts: DataProducts[] = await client.fetch(productsQuery);
  const productsPerPage = 12;
  const startIndex = (page - 1) * productsPerPage;
  return dataProducts.slice(startIndex, startIndex + productsPerPage);
}

function Shop() {
  const [dataProducts, setDataProducts] = useState<DataProducts[]>([]);
  const [currentPage, setCurrentPage] = useState(1);

  useEffect(() => {
    const loadProducts = async () => {
      const products = await fetchProducts(currentPage);
      setDataProducts(products);
    };

    loadProducts();
  }, [currentPage]);

  const handlePageChange = (page: number) => {
    setCurrentPage(page);
  };
```

1.3 Integrating API Calls in the Project

• API calls were incorporated into Next.js lifecycle methods or React hooks (useState , useEffect) & Sanity Query, Sanity Client option to fetch and display data dynamically.

• Example usage on the Product Detail Page:

• Displayed data such as product: name, price, & imagePath

Frontend Display of API Data:

Chair Wibe	Cozy Sofa	White Bed	Blue Bed
Rs. 1200	Rs. 520	Rs. 120	Rs. 780
Replica Table	Liberty Center	Diondre Chair	Luxury Flower Bed
Rs. 750	Rs. 1100	Rs. 720	Rs. 2500
High Quality Modern Sofa	Armchair Chair Set	Pink Lounge Chair	Rapson Thirty-Nine Sofa
Rs. 150	Rs. 850	Rs. 1600	Rs. 1300

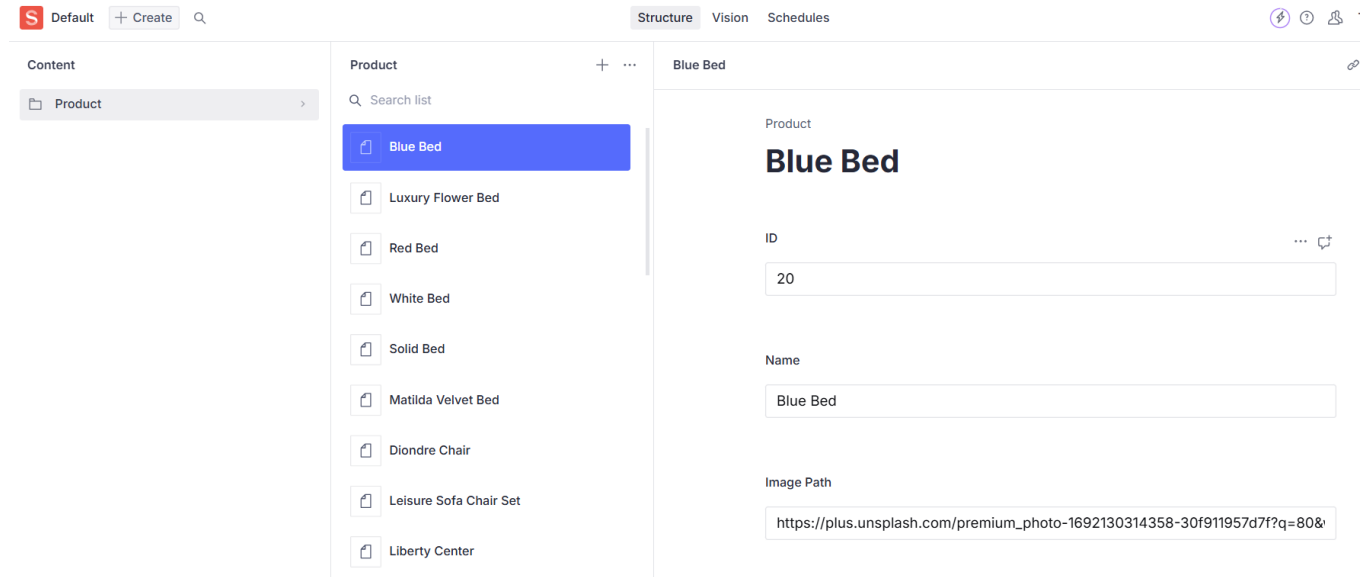|			
Replica Table	Leisure Sofa Chair Set	Solid Bed	White Bed
Rs. 750	Rs. 1800	Rs. 100	Rs. 120
Red Bed	Nautilus Lounge Chair	Armchair Chair Set	Sleek Modern Table
Rs. 320	Rs. 1450	Rs. 850	Rs. 2000
Nautilus Lounge Chair	Alpha Table	Diondre Chair	Matilda Velvet Bed
Rs. 1450	Rs. 900	Rs. 720	Rs. 600

Adjustments Made to Schemas

2. Schema Adjustments

To accommodate the external API data, the following schema changes were implemented in Sanity CMS:

Rating number field store product ratings

```ts
export default {
  name: 'product',
  title: 'Product',
  type: 'document',
  fields: [
    {
      name: 'id',
      title: 'ID',
      type: 'string',
    },
    {
      name: 'name',
      title: 'Name',
      type: 'string',
    },
    {
      name: 'imagePath',
      title: 'Image Path',
      type: 'url',
    },
    {
      name: 'price',
      title: 'Price',
      type: 'number',
    },
    {
      name: 'description',
      title: 'Description',
      type: 'text',
    },
    {
      name: 'discountPercentage',
      title: 'Discount Percentage',
      type: 'number',
    },
    {
      name: 'isFeaturedProduct',
      title: 'Is Featured Product',
      type: 'boolean',
    },
    {
      name: 'stockLevel',
      title: 'Stock Level',
      type: 'number',
    },
    {
      name: 'category',
      title: 'Category',
      type: 'string',
    },
  ],
};
```

Conclusion

The API integration and data migration processes for the **Furniture Marketplace** were successfully completed. The adjustments made to schemas ensured compatibility with the external API data, while the migration script effectively populated Sanity CMS. The marketplace is now ready to display and manage products dynamically, providing a seamless experience for users.