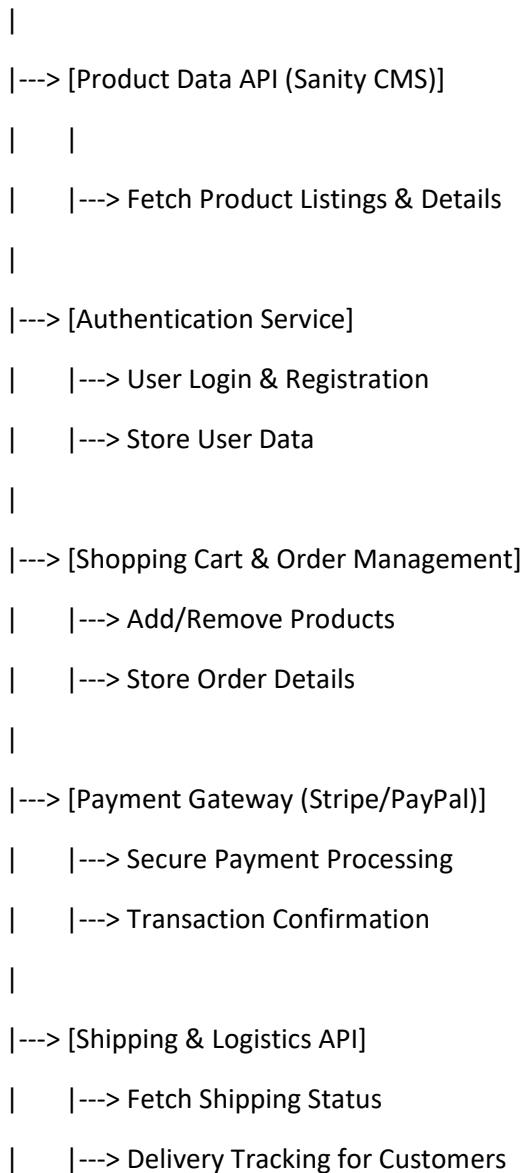


MARKETPLACE TECHNICAL FOUNDATION-

(General-e-Commerce)

System Architecture

[Frontend (Next.js)]



Key Workflows & Data Flow

1. User Registration & Authentication

- The user signs up or logs in.
- Authentication Service verifies credentials and stores user data in the database.
- The user is redirected to the homepage after login.

2. Product Browsing

- The user browses product categories on the **Next.js frontend**.
- The frontend calls the **Product Data API (Sanity CMS)** to fetch product listings.
- Products are dynamically displayed on the website.

3. Order Placement

- The user adds items to the cart and proceeds to checkout.
- Order details are sent to **Sanity CMS** for record-keeping.
- The **Payment Gateway (Stripe/PayPal)** processes the transaction securely.
- Once payment is confirmed, the order status is updated in **Sanity CMS**.

4. Shipment Tracking

- After order confirmation, shipping details are fetched using a **Third-Party Logistics API**.
- Real-time order tracking information is displayed to the customer.

Plan API Requirements

User Login

- **Endpoint:** /api/auth/login
- **Method:** POST
- **Description:** Authenticate and log in a user.
- **Request Example:**
- {

```
"email": "john@example.com",
```

```
    "password": "securePassword123"
  }
```

- **Response Example:**

```
{ "token": "string", "userId": 101 }
```

Fetch Product List

- **Endpoint:** /api/products
- **Method:** GET
- **Description:** Retrieve a list of available products.
- **Response Example:**

```
[
  {href: '/shop/trenton-modular-sofa_3', src: '/assets/picks1.png', title:
'Trenton modular sofa_3', price: '25,000.00'},
  {href: '/shop/grain-coffee-table', src: '/assets/table1.png', title:
'Grain coffee table', price: '15,000.00'},
]
```

Fetch Product Details

- **Endpoint:** /api/products/{id}
- **Method:** GET
- **Description:** Fetch details of a specific product.
- **Response Example:**

```
[
  {href: '/shop/trenton-modular-sofa_3', src: '/assets/picks1.png', title:
'Trenton modular sofa_3', price: '25,000.00', stock: 5},
  {href: '/shop/grain-coffee-table', src: '/assets/table1.png', title:
'Grain coffee table', price: '15,000.00', stock: 10},
]
```

Add Item to Cart

- **Endpoint:** /api/cart
- **Method:** POST
- **Description:** Add an item to the user's cart.
- **Request Example:**

```
{  
  "userId": 101, "productId": 1, "quantity": 2  
}
```

Response Example

```
{ "message": "Item added to cart", "cartId": 501 }
```

Get Order Details

- **Endpoint:** /api/orders/{orderId}
- **Method:** GET
- **Description:** Retrieve details of a specific order.
- **Response Example:**

```
{  
  "orderId": 1001, "status": "Processing", "items": [ { "productId": 1,  
  "name": "Wooden Sofa", "quantity": 2 } ], "totalPrice": 599.98  
}
```