# Marketplace-Technical-Foundation

## Overview

This document outlines the technical foundation for the Marketplace project, including routes, API endpoints, and order processing flow.

## Technology Stack

\*\*Frontend:\*\* Next.js

\*\*Backend:\*\* Sanity CMS

\*\*Third-Party APIs:\*\*

- Product listing: `/products`

- Product details: `/products/{product\_id}`

\*\*Sanity API Endpoints:\*\*

- \*\*Customer Schema (`/customer`)\*\*: Create (POST), Get (GET), Update (PUT), Delete (DELETE)

- \*\*Order Schema (`/order`)\*\*: Create (POST), Get (GET), Update (PUT), Delete (DELETE)

- \*\*Cart Schema (`/cart`)\*\*: Create (POST), Get (GET), Update (PUT), Delete (DELETE)

## Workflow

### Homepage (`/`)

* Fetch and display product listings from a third-party API.
* User can navigate to individual product pages.

### Product Page (`/products/{product\_id}`)

* Fetch and display detailed product information.
* Option to add product to cart.

### Cart Page (`/cart`)

* Display user's shopping cart.
* Allows adding, editing, and removing items.
* Stores data in the Cart Schema (Sanity CMS).

### Checkout Page (`/checkout`)

* Allows users to enter customer details and review order.
* Displays order total and a confirm button.
* \*\*Backend Actions:\*\*
* - Create a new customer record in Sanity.
* - Create a new order record in Sanity.
* - Assign \*\*Shipping ID\*\* upon successful checkout.

### Order Processing

* Once an order is placed, the system assigns a \*\*Shipping ID\*\*.
* Order status updates:
* 1. \*\*Processing\*\* → Order received.
* 2. \*\*Shipped\*\* → Order dispatched, assign \*\*Tracking ID\*\*.
* 3. \*\*Delivered\*\* → Order successfully delivered.

### Order Tracking (`/order/{order\_id}`)

* Users can track their order using the \*\*Tracking ID\*\*.
* Fetches order details and current status from the Order Schema in Sanity.

## Data Schemas

### Product Schema (Sanity)

* `product\_id`: Unique identifier
* `name`: Product name
* `image`: Product image URL
* `price`: Product price
* `description`: Product description
* `stock`: Available stock count

### Customer Schema (Sanity)

* `customer\_id`: Unique identifier
* `name`: Customer's name
* `email`: Email address
* `address`: Shipping address
* `phone`: Contact number

### Order Schema (Sanity)

* `order\_id`: Unique identifier
* `customer\_id`: Associated customer
* `items`: List of products purchased
* `total\_price`: Total amount
* `status`: Processing | Shipped | Delivered
* `shipping\_id`: Unique shipping identifier
* `tracking\_id`: Tracking number assigned after dispatch

## Diagram

Below is a high-level flow diagram illustrating the route workflow:

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| Homepage | --> | Product Page | --> | Cart Page | --> | Checkout |  
+-----------+ +----------------+ +------------+ +-----------+  
 | |  
 v v  
 +----------------+ +----------------+  
 | Order Created | | Order Tracking |  
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