Marketplace Technical Foundation – BI Structure Ecommerce

This project is e-commerce platform for selling a **wide range of Nike products**. It focuses on providing a seamless shopping experience with wide range of Nike products, user-friendly navigation, responsive design, and secure authentication.

Technologies Used

- **Frontend:** Built using Next.js and Tailwind CSS for dynamic, responsive user interfaces.
- **Backend:** Sanity CMS for content management, providing API-based data retrieval.
- **Authentication:** Clerk for secure and seamless user login/signup.
- **Deployment:** Hosted on Vercel for scalability and performance.

Goals and Objectives

1. Business Goals:

a. Many customers face problem in searching original Nike Products all in one place.

b. We will provide wide range of products in multiple categories like shoes, sports clothing and accessories.

c. We will make website, and make user interface easy to understand and use.

2. Technical Goals:

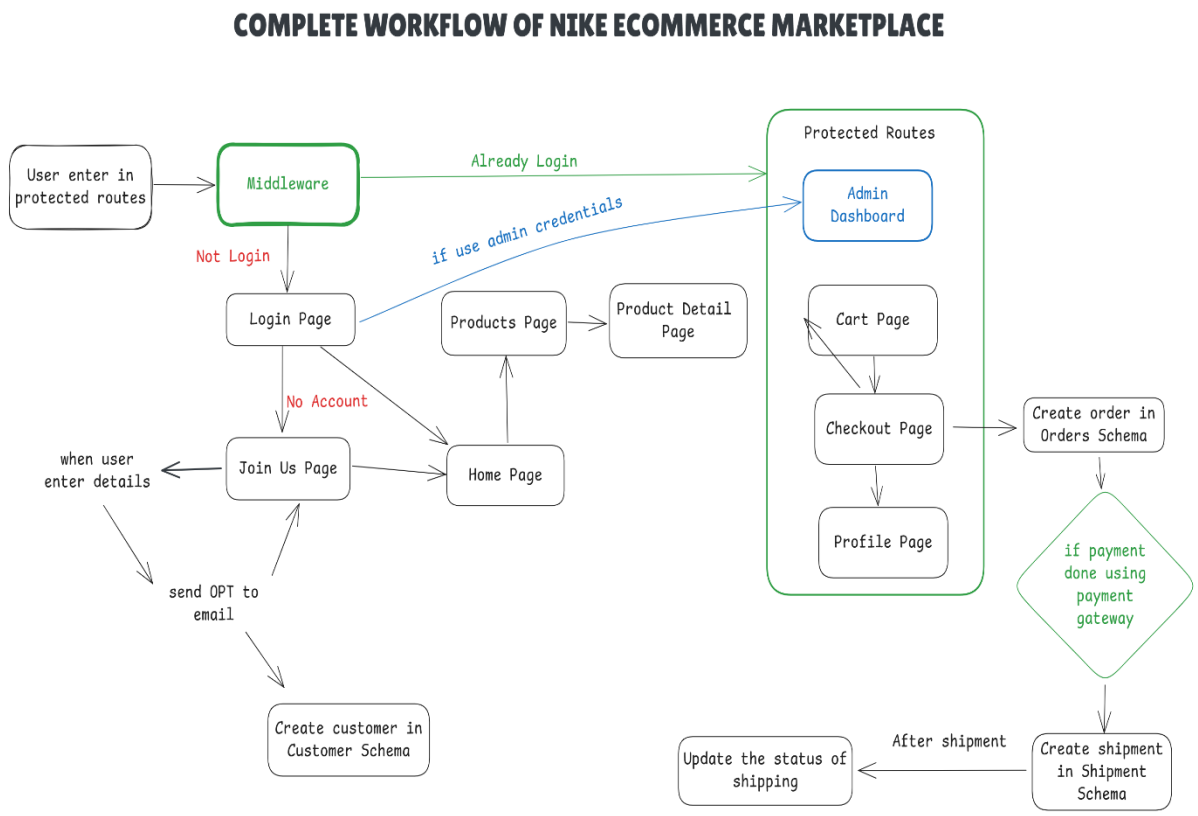
a. Implement a scalable system architecture.

b. Integrate third-party APIs for secure payment and real-time shipment tracking.

- Design user-friendly authentication workflows using Clerk.

System Architecture

Work Flow Diagram:



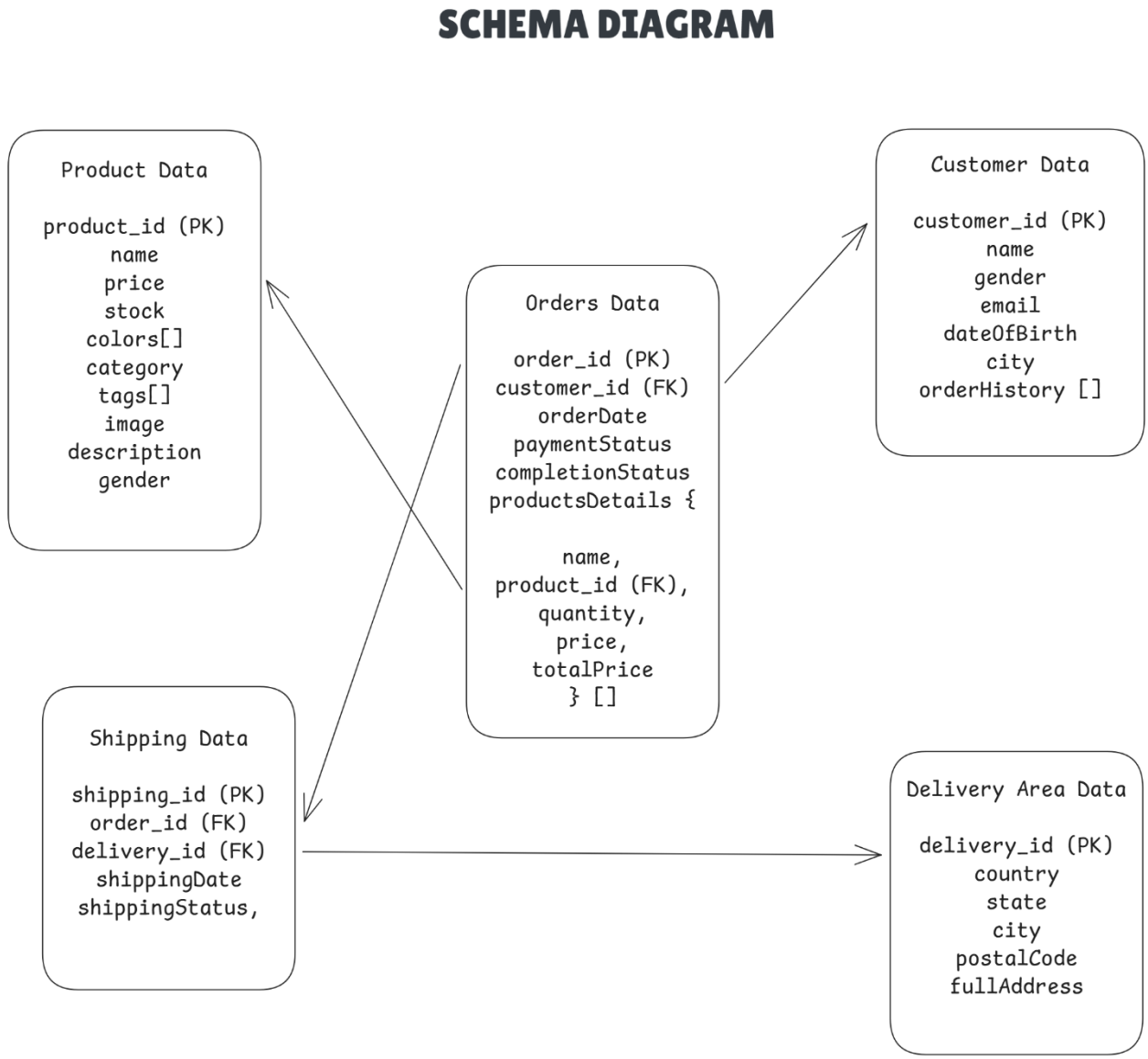
Key Workflows

1. **User Registration:**
    - First, User signs up via Clerk.
    - Confirmation email sent to the user..
    - After confirmation using OTP user Data stored in Sanity CMS in Customers Schema.
2. **Product Browsing:**
    - User navigates to the home page.
    - Product data fetched dynamically from Sanity CMS from Products Schema.
    - Products displayed with filters and categories.
3. **Order Placement:**
    - User adds products to the cart.
    - Proceeds to checkout.
    - Then Order details stored in Sanity CMS in Orders Schema.
4. **Payment Workflow:**

- User select the preferred payment method at checkout.
- Payment details are securely processed through a third-party payment gateway.
- Confirmation of successful payment is received and stored in Sanity CMS.

5. **Shipment Tracking:**
    - Order status fetched via a third-party API.
    - Real-time updates displayed on the user dashboard.

Schema's Relationship Diagram



API Requirements

1. Product Management:

- **Endpoint:** /products
- **Method:** GET,
- **Description:** Fetch product details from Product Schema.

2. Order Management:

- **Endpoint:** /orders
- **Method:** POST
- **Description:** Create a new order in Orders Schema.

3. User Management:

- **Endpoint:** /user
- **Method:** GET
- Description: Fetch user based on their gender, id, and email.

4. Register Customer:

- **Endpoint:** /register
- **Method:** POST
- Description: Create a new customer in Customer Schema

This document serves as a comprehensive submission for the hackathon, showcasing the technical foundation and implementation roadmap for the BI Structure Ecommerce platform.