

- proceed the Checkout.
- Enter payment details and Address.

ii ORDER PROCESSING

- update stock in the database
- Notify Admin

iii, DELIVERY TRACKING.

- update order status as shipped out for delivery or delivered.

AUTHENTICATION :-

User sign-up with E-mail and Password.

API PLANE :-

1. Internal APIs :-

• User Management:

- /API/Users/signup [Post] Register new User -

- /API/Users/Login [Post] Authentication Users -

(a) PRODUCT MANAGEMENT:

- /API/Product/: Id [GET]: Fetch product detail.

- /API/Products/[Post]: Add a new product

(b) ORDER MANAGEMENT:

- /API/order[Post]: Place an order.

- /API/order/: Id [GET]: Fetch order detail -

(2) THIRDED PARTY APIS :-

(a) Payments:

- Strip API; generate payment intent

(b) Location Services:

- Google Map API ; Fetch Users Location
- Calculate delivery distance

(C) NOTIFICATION:-

Twilio API ; Send Sms or whatsapp notifications for order updates.

ENTITIES AND RELATIONSHIPS:-

Entities:

- Users ; Customers and admins.
- Products ; Item listed in the Market Place.
- Order ; transaction by Customer
- Category : Organiz product into groups

RELATIONSHIPS:-

- One Customer Place Multiple Order.
- One order can have Multiple products
- Each product belongs to a Category

Market-Place Structure:-

a) Front-end:-

- Technology Stack: React Js, Next.Js for dynamic and Responsive UI.
- Key Components:
 - Home page, Product Category, banners, Search bar, feature products,
 - Product Page; product detail, reviews and add to Cart functionality.
 - Cart Page; list of Selected products with Check out- options.
 - User dash board; profile order, history, Save items.

• Responsive Design:-

Use CSS frame work like tailwind CSS for mobile first design.

Backend:-

• technology Stack:-

node js with express js for APIs and server side logic.

• Key features:

Product:
 Id, Name, description,
 prices, stock, category, Images,

ORDER:
 Id, User Id, Product Ids,
 status, payment status.

Categories :-
 Id, Name, Parent Category

Reviews:
 Id, User Id, Product Id,
 Rating, Comments -

Work Flows:-

(a) product Management:

- i, Admin Adds a product:
 fill in details like name, Price,
 category and upload images.
- ii Save in the Database.

(b) ORDER WORK FLOW:-

- i, User Places An Order:

GWT OR OAuth for Secure login.

• Product Management:-

CRUD (Create Read update delete)
for Product.

• Order Management:-

handle order life cycle.

• Payment Integration:-

Strip or Razorpay -

• Notification :-

email, SMS, Updates via third
party APIs like Twilio.

• Database:-

• Relation DB:- my SQL or
postgres SQL for structured data.

• Entities:-

User: Id, Name, E-mail,

Diagram: -

