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**Marketplace Technical Foundation - [StitchHub]**

## 1. Workflow Stages

### A. User Interaction on the Platform

1. **Homepage**
   - Users land on a clean, responsive homepage showcasing available products
   - Option to log in or register for a business account to get updated at each step while their order is getting ready.
2. **Product Browsing**
   - Products are displayed with filters for categories, sizes, and customization options.
   - Users can view product details, including bulk pricing and available customization options,discounts,fabric type.
3. **Order Customization and Placement**
   - Users add products to the cart.
   - Customization details (e.g., color, logo, or size preferences) are provided in the cart.
   - Final order is reviewed and placed.

### B. Backend Process

1. **Order Management System**
   - The order and customization details are saved in the database.
   - Backend validates the order for stock availability.
2. **Manufacturing Workflow**
   - Order details are sent to the production team.
   - Each stage (Designing, Stitching, Packaging) is tracked.
3. **Logistics and Shipment**
   - Once ready, the order is handed over to the logistics team.

- ○ Real-time tracking details are generated for the customer.

**C. Payment Processing**

1. **Secure Gateway**
   - ○ Payments are processed via a secure payment gateway (e.g., Stripe).
   - ○ Payment statuses are tracked and linked to the order.
2. **Invoice Generation**
   - ○ A detailed invoice is sent to the customer's registered email.

# 2. Technical Components

### Frontend (Customer Portal)

- Built with Next.js for high performance and SEO optimization.
- Responsive design using Tailwind CSS.
- Key Pages:
  - ○ Homepage
  - ○ Product Listing and Details
  - ○ Cart and Checkout
  - ○ User Dashboard (Order History and Tracking)

### Backend

- **Sanity CMS**:
  - ○ Manages product catalog and order data.
- **Custom APIs**:
  - ○ Fetch product details, update order status, and process payments.
- Key Collections:
  - ○ `Products`: Stores product details and stock.
  - ○ `Orders`: Tracks orders and their statuses.

- ○ `Users`: Stores customer information.


- **Third party APIs**

Integrate services like shipment tracking and payment processig.

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# 3. Detailed API Plan

**Endpoints**

1. **Products API**
   - ○ **Endpoint**: `/api/products`
   - ○ **Method**: `GET`
   - ○ **Purpose**: Fetch product details for display.
2. **Order API**
   - ○ **Endpoint**: `/api/orders`
   - ○ **Method**: `POST`
   - ○ **Purpose**: Place a new order with customization details.
3. **Manufacturing Status API**
   - ○ **Endpoint**: `/api/manufacturing`
   - ○ **Method**: `GET`
   - ○ **Purpose**: Fetch the current production status of an order.
4. **Shipment Tracking API**
   - ○ **Endpoint**: `/api/shipment`
   - ○ **Method**: `GET`
   - ○ **Purpose**: Provide real-time shipment tracking details.
5. **Payment API**
   - ○ **Endpoint**: `/api/payment`
   - ○ **Method**: `POST`
   - ○ **Purpose**: Process payments for orders.