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E-Commerce Website for Chairs

Website Documentation

Frontend:

- **Home Page** - Showcasing featured chairs and offers.
- **Search Page** - Customers can search and filter chairs.
- **Product Page** - Detailed view of a selected chair.
- **Cart Page** - Customers can review and modify their selected items.
- **Checkout Page** - Payment and order confirmation.
- **User Dashboard** - Order history and account management.
- **Admin Dashboard** - Product and order management.

API Layer:

- Handles requests and responses between frontend and backend.

Backend:

- User Authentication
- Product Management
- Order Management
- Payment Processing

Database:

- Customer Information

- Product Details
- Orders
- Payment Records

Payment Gateways:

- Stripe
- EasyPaisa
- JazzCash

STRUCTURE

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| Frontend (UI)    |

| - Home Page      |

| - Search Page    |

| - Product Page   |

| - Cart Page      |

| - Checkout Page  |

| - User Dashboard |

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|   API Layer      |

| - User Auth      |

| - Product Mgmt   |

| - Orders         |

| - Payments       |

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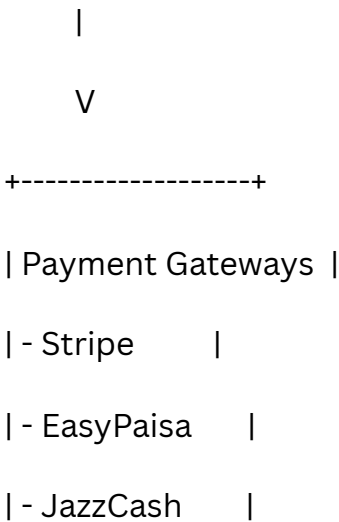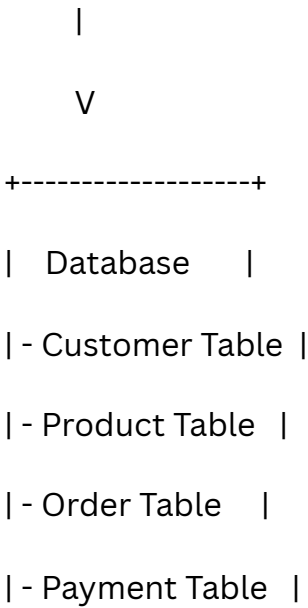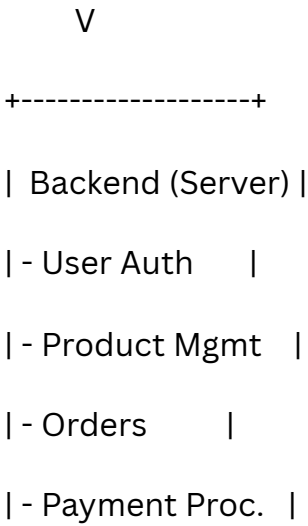
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        |  Backend (Server) |

        | - User Auth      |

        | - Product Mgmt   |

        | - Orders         |

        | - Payment Proc.  |

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        |   Database       |

        | - Customer Table |

        | - Product Table  |

        | - Order Table    |

        | - Payment Table  |

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        | Payment Gateways |

        | - Stripe         |

        | - EasyPaisa      |

        | - JazzCash       |

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Website Overview

This document defines the structure of your e-commerce website for chairs. It explains the flow of the frontend, backend, API, and payment methods, ensuring a smooth user experience.

1. Frontend (User Interface):

The frontend is designed to be user-friendly and responsive.

Key Features:

- **Home Page** - Display top-selling chairs and special deals.
- **Search Page** - Allow customers to find chairs based on price, type, and material.
- **Product Page** - Show product details, images, and user reviews.
- **Cart Page** - Users can add, remove, and update items before checkout.
- **Checkout Page** - Secure payment and order summary.
- **User Dashboard** - Manage orders and personal details.

Technologies:

- React.js - For a dynamic UI.
- Next.js - Server-side rendering and performance optimization.
- Tailwind CSS - Modern and responsive styling.

2. Backend (Server-Side Logic):

The backend manages business logic and data processing.

Key Features:

- **User Authentication** - Register and login functionality.
- **Product Management** - Add, update, and delete chairs.
- **Order Management** - Process and manage customer orders.
- **Payment Processing** - Secure integration with payment gateways.

Technologies:

- Node.js - Backend development.
- Express.js - API development.
- Database: MySQL or MongoDB.

3. API (Application Programming Interface):

APIs facilitate communication between frontend and backend.

Key Endpoints:

1. **User Authentication:**
   - POST /api/auth/register - Register a new user.
   - POST /api/auth/login - User login.

2. **Product Management:**
   - GET /api/products - Fetch available chairs.
   - POST /api/products - Add a new product (admin only).
3. **Order Management:**
   - POST /api/orders - Create a new order.
   - GET /api/orders - Fetch user orders.
4. **Payment Processing:**
   - POST /api/payment - Process payments.

4. Payment Methods:

Secure and reliable payment integration.

- **Stripe** - For international payments.
- **EasyPaisa/JazzCash** - For local payments.

Payment Flow:

1. The customer enters payment details at checkout.
2. Payment is processed via the backend API.
3. The payment gateway (e.g., Stripe) finalizes the transaction.
4. Payment status is stored in the database.

5. Database Structure:

All data is securely stored in the database.

Tables:

1. **Customer Table:**
   - customer_id, name, email, password, created_at
2. **Product Table:**
   - product_id, name, category, price, stock, description
3. **Order Table:**
   - order_id, customer_id, total_price, status, order_date
4. **Payment Table:**
   - payment_id, order_id, payment_method, amount, status, payment_date

6. Website Flow:

Customer Flow:

1. The customer visits the website and registers/logs in.
2. Searches for chairs and adds them to the cart.
3. Proceeds to checkout and makes a payment.
4. Receives an order confirmation.

Admin Flow:

1. Admin adds, updates, or removes chairs.
2. Manages customer orders and payments.

7. Security Measures:

- **SSL Certificate** - For secure transactions.
- **Data Encryption** - Encrypt sensitive information.
- **Authentication** - Secure login (JWT tokens).
- **Regular Backups** - Prevent data loss.

8. Deployment:

- **Hosting:** Vercel (for Next.js apps).
- **Domain Name:** Custom domain registration.

Conclusion:

The structure of this e-commerce website is well-organized, ensuring seamless functionality. This documentation will guide the development process, making the project scalable and efficient.