

DOCUMENTATION OF DATABASE

ENTITIES	DESCRIPTION
USERS	Stores details of all platform users, including buyers and sellers, their roles, and contact info.
PRODUCTS	Contains information about the products listed by sellers, such as name, description, price, and stock.
CATEGORIES	Manages product categories, enabling hierarchical organization and browsing of products.
CART	Tracks buyers' selected products before purchase. Each user has one active cart at a time.
CART_ITEMS	Stores individual product entries in a cart, including quantity and price at the time of addition.
ORDERS	Records confirmed purchases, including user details, total amount, and order status.
ORDER_ITEMS	Tracks individual products associated with an order, including quantity and price at purchase.
PAYMENTS	Manages payment details for orders, such as method, status, and timestamps.
ADMIN MANAGEMENT	Stores admin user details and provides tools to oversee the platform's users, products, orders, and payments.

1. USERS TABLE

ATTRIBUTE	DATA TYPE	DESCRIPTION
USER_ID (PK)	INT	Unique identifier for each user.
FIRST NAME	VARCHAR (255)	First name chosen by the user.
LAST NAME	VARCHAR (255)	Last name chosen by user
EMAIL	VARCHAR (255)	Unique email address for account communication and login.

PASSWORD	VARCHAR (255)	Hashed password for secure authentication.
ROLE	ENUM ('buyer', 'seller')	Role of the user, either "buyer" or "seller".
PHONE_NUMBER	VARCHAR (15)	Contact number of the user. Optional but useful for communication.
ADDRESS	TEXT	User's address. Primarily used for buyers during the checkout process.
PROFILE_PICTURE	VARCHAR (255)	URL or path to the user's profile picture. Optional.
CREATED_AT	TIMESTAMP	Timestamp when the user account was created. Automatically generated.
UPDATED_AT	TIMESTAMP	Timestamp when the user details were last updated. Automatically updated.
SELLER_RATING	DECIMAL (3, 2)	Average rating given to a seller by buyers (only for "seller" role). Default: NULL for buyers.
SELLER_DESCRIPTION	TEXT	Short description or bio for sellers to display their business information. Optional, for "seller" role.

2. PRODUCT		
ATTRIBUTE	DATA TYPE	DESCRIPTION
PRODUCT_ID	INT	Primary Key. Unique identifier for each product.
SELLER_ID	INT	Foreign Key referencing the user's table. Identifies the seller managing this product.
NAME	VARCHAR (255)	Name of the product.
DESCRIPTION	TEXT	Detailed description of the product.

PRICE	DECIMAL (10, 2)	Selling price of the product.
STOCK	INT	Quantity of the product available in inventory.
CATEGORY_ID	INT	Foreign Key reference the categories table. Links the product to its category.
IMAGE_URL	VARCHAR (255)	URL or path to the product's primary image. Optional but recommended.
CREATED_AT	TIMESTAMP	Timestamp when the product was added to the system. Automatically generated.
UPDATED_AT	TIMESTAMP	Timestamp when the product details were last updated. Automatically updated.
RATING	DECIMAL (3, 2)	Average rating of the product based on buyer reviews. Default: NULL until reviews exist.
IS_ACTIVE	BOOLEAN	Indicates if the product is active and available for sale (TRUE by default).

3. CATEGORIES TABLE		
ATTRIBUTE	DATA TYPE	DESCRIPTION
CATEGORY_ID	INT	Primary Key. Unique identifier for each category.
NAME	VARCHAR (255)	Name of the category.
DESCRIPTION	TEXT	Optional detailed description of the category.
PARENT_ID	INT	Optional Foreign Key referencing another category_id for subcategories.
CREATED_AT	TIMESTAMP	Timestamp when the category was created. Automatically generated.
UPDATED_AT	TIMESTAMP	Timestamp when the category details were last updated.

4. CART TABLE

ATTRIBUTE	DATA TYPE	DESCRIPTION
CART_ID	INT	Primary Key. Unique identifier for each cart.
USER_ID	INT	Foreign Key referencing users. Links cart to a specific buyer.
CREATED_AT	TIMESTAMP	Timestamp when the cart was created.
UPDATED_AT	TIMESTAMP	Timestamp when the cart was last updated.

5. CART_ITEMS TABLE		
ATTRIBUTE	DATA TYPE	DESCRIPTION
CART_ITEM_ID	INT	Primary Key. Unique identifier for each cart item.
CART_ID	INT	Foreign Key referencing cart_id.
PRODUCT_ID	INT	Foreign Key referencing products.
QUANTITY	INT	Quantity of the product in the cart.
PRICE_AT_ADDITION	DECIMALO (10, 2)	Price of the product at the time it was added to the cart.

6. ORDERS TABLE		
ATTRIBUTE	DATA TYPE	DESCRIPTION
ORDER_ID	INT	Primary Key. Unique identifier for each order.
USER_ID	INT	Foreign Key referencing users. Links the order to the buyer.
TOTAL_AMOUNT	DECIMAL (10, 2)	Total cost of the order.
STATUS	ENUM	Current status of the order (Pending, Shipped, Delivered, etc.).
CREATED_AT	TIMESTAMP	Timestamp when the order was placed.
UPDATED_AT	TIMESTAMP	Timestamp when the order status was last updated.

7. ORDER_ITEMS TABLE		
ATTRIBUTE	DATA TYPE	DESCRIPTION
ORDER_ITEM_ID	INT	Primary Key. Unique identifier for each ordered item.
ORDER_ID	INT	Foreign Key referencing orders.
PRODUCT_ID	INT	Foreign Key referencing products.
QUANTITY	INT	Quantity of the product in the order.
PRICE	DECIMAL (10, 2)	Price of the product at the time of order.

8. PAYMENTS TABLE		
ATTRIBUTE	DATA TYPE	DESCRIPTION
PAYMENT_ID	INT	Primary Key. Unique identifier for each payment.
ORDER_ID	INT	Foreign Key referencing orders.
PAYMENT_METHOD	ENUM	Payment method used (Card, PayPal, etc.).
PAYMENT_STATUS	ENUM	Status of payment (Success, Failed).
CREATED_AT	TIMESTAMP	Timestamp when the payment was made.

9. ADMIN MANAGEMENT		
ATTRIBUTE	DATA TYPE	DESCRIPTION
ADMIN_ID	INT	Primary Key. Unique identifier for each admin user.
USERNAME	VARCHAR (255)	Admin's username.
EMAIL	VARCHAR (255)	Admin's email.
PASSWORD	VARCHAR (255)	Admin's hashed password.
ROLE	ENUM	Admin's role (Super Admin, Moderator, etc.).
CREATED_AT	TIMESTAMP	Timestamp when the admin account was created.

UPDATED_AT	TIMESTAMP	Timestamp when the admin account was last updated.
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Entity Relationships

ENTITY 1	RELATIONSHIP	ENTITY 2	DESCRIPTION
Users	One-to-Many	Products	A seller (user) can list multiple products.
Users	One-to-One	Cart	Each buyer (user) has one active cart at a time.
Cart	One-to-Many	Cart_Items	A cart can contain multiple items (products).
Products	Many-to-Many	Orders	A product can be part of many orders, and an order can contain many products.
Users	One-to-Many	Orders	A buyer (user) can place multiple orders.
Orders	One-to-Many	Order_Items	An order can contain multiple items (products).
Products	Many-to-One	Categories	A product belongs to one category, but a category can have multiple products.
Orders	One-to-One	Payments	Each order has one corresponding payment record.
Admin Management	One-to-Many	Users	Admins can manage multiple users (create, update, or delete).
Admin Management	One-to-Many	Products	Admins can manage multiple products (approve, remove, or edit listings).
Admin Management	One-to-Many	Orders	Admins can manage multiple orders (review or update statuses).