

# Database Schema Planning

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## Overview

The database schema will be designed to support all the functionalities of the ZeCommerce platform. It will include tables for users, products, orders, payments, and more. We will use **PostgreSQL** as the database due to its robustness, scalability, and support for complex queries.

## Tables

### 1. Users

- **id** (Primary Key): Unique identifier for each user.
- **name**: Full name of the user.
- **email**: Email address of the user.
- **password**: Hashed password for authentication.
- **address**: Shipping address of the user.
- **phone\_number**: Contact number of the user.
- **created\_at**: Timestamp when the user was created.
- **updated\_at**: Timestamp when the user was last updated.

### 2. Products

- **id** (Primary Key): Unique identifier for each product.
- **name**: Name of the product.
- **description**: Detailed description of the product.
- **price**: Price of the product.
- **stock**: Number of items available in stock.
- **category\_id** (Foreign Key): Identifier for the product category.
- **created\_at**: Timestamp when the product was created.
- **updated\_at**: Timestamp when the product was last updated.

### 3. Orders

- **id** (Primary Key): Unique identifier for each order.
- **user\_id** (Foreign Key): Identifier for the user who placed the order.
- **total\_amount**: Total amount for the order.
- **status**: Current status of the order (e.g., pending, shipped, delivered).
- **created\_at**: Timestamp when the order was created.
- **updated\_at**: Timestamp when the order was last updated.

### 4. Order\_Items

- **id** (Primary Key): Unique identifier for each order item.
- **order\_id** (Foreign Key): Identifier for the order.
- **product\_id** (Foreign Key): Identifier for the product.
- **quantity**: Quantity of the product ordered.
- **price**: Price of the product at the time of order.

- created\_at: Timestamp when the order item was created.
- updated\_at: Timestamp when the order item was last updated.

## 5. Payments

- id (Primary Key): Unique identifier for each payment.
- order\_id (Foreign Key): Identifier for the order.
- payment\_method: Method of payment (e.g., credit card, PayPal).
- amount: Amount paid.
- status: Current status of the payment (e.g., pending, completed).
- created\_at: Timestamp when the payment was created.
- updated\_at: Timestamp when the payment was last updated.

## 6. Categories

- id (Primary Key): Unique identifier for each category.
- name: Name of the category.
- created\_at: Timestamp when the category was created.
- updated\_at: Timestamp when the category was last updated.

## Relationships

- A user can have multiple orders.
- An order can have multiple order items.
- A product can belong to multiple categories.
- A category can have multiple products.