E-Commerce Platform Database Schema

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Contents

1 Introduction

This document provides an overview of the database schema for the E-Commerce platform. The database schema is essential for understanding how data is organized, stored, and related within the system. The schema diagram is provided to visualize the structure of the database.

2 Database Schema Diagram

The following diagram illustrates the database schema for the E-Commerce platform:
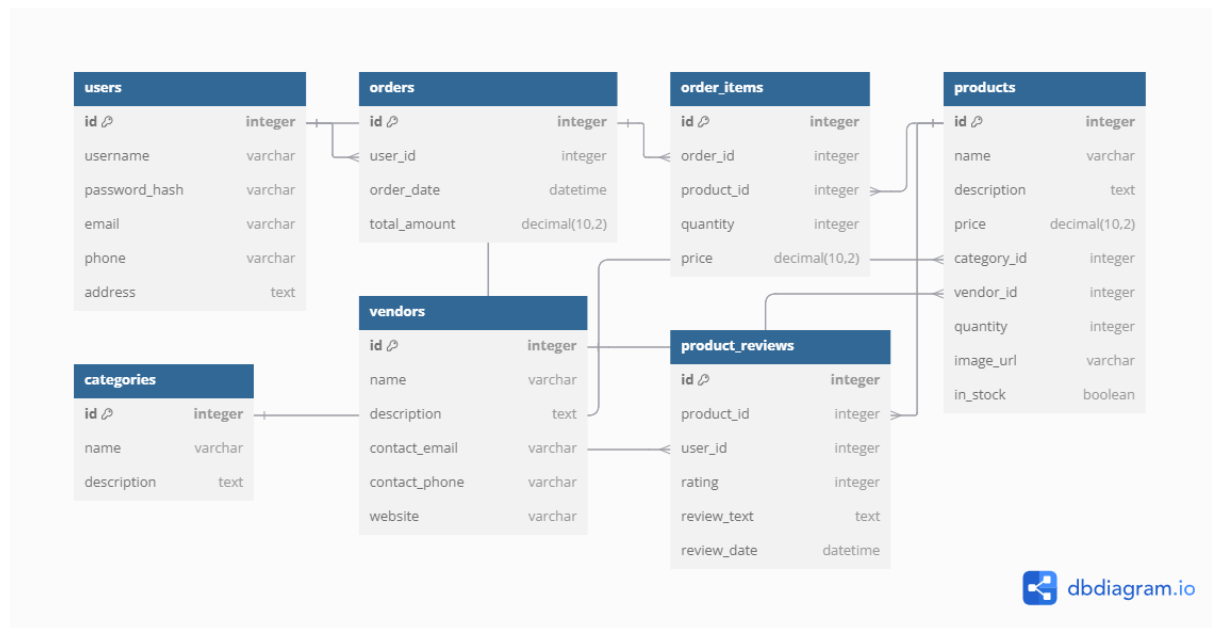

Figure 1: E-Commerce Platform Database Schema

3 Tables Overview

This section describes the various tables in the database schema, along with their primary fields and relationships.

3.1 Users Table

- **id** (Primary Key, Integer): Unique identifier for each user.
- **username** (Varchar): The username of the user.
- **password_hash** (Varchar): Hashed password for user authentication.
- **email** (Varchar): The user's email address.
- **phone** (Varchar): The user's phone number.
- **address** (Text): The user's physical address.

3.2 Orders Table

- **id** (Primary Key, Integer): Unique identifier for each order.
- **user_id** (Foreign Key, Integer): References the **Users** table to associate the order with a specific user.
- **order_date** (Datetime): The date and time when the order was placed.
- **total_amount** (Decimal): The total amount of the order.

3.3 Order Items Table

- **id** (Primary Key, Integer): Unique identifier for each order item.
- **order_id** (Foreign Key, Integer): References the **Orders** table to associate the item with a specific order.
- **product_id** (Foreign Key, Integer): References the **Products** table to associate the item with a specific product.
- **quantity** (Integer): The quantity of the product ordered.
- **price** (Decimal): The price of the product at the time of the order.

3.4 Products Table

- **id** (Primary Key, Integer): Unique identifier for each product.
- **name** (Varchar): The name of the product.
- **description** (Text): A detailed description of the product.
- **price** (Decimal): The price of the product.
- **category_id** (Foreign Key, Integer): References the **Categories** table to categorize the product.
- **vendor_id** (Foreign Key, Integer): References the **Vendors** table to associate the product with a specific vendor.
- **quantity** (Integer): The stock quantity of the product.
- **image_url** (Varchar): URL to the product's image.
- **in_stock** (Boolean): Indicates whether the product is in stock.

3.5 Vendors Table

- **id** (Primary Key, Integer): Unique identifier for each vendor.
- **name** (Varchar): The name of the vendor.
- **description** (Text): A description of the vendor's business.
- **contact_email** (Varchar): The vendor's contact email address.
- **contact_phone** (Varchar): The vendor's contact phone number.
- **website** (Varchar): The vendor's website URL.

3.6 Categories Table

- **id** (Primary Key, Integer): Unique identifier for each category.
- **name** (Varchar): The name of the category.
- **description** (Text): A description of the category.

3.7 Product Reviews Table

- **id** (Primary Key, Integer): Unique identifier for each product review.

- **product_id** (Foreign Key, Integer): References the **Products** table to associate the review with a specific product.

- **user_id** (Foreign Key, Integer): References the **Users** table to associate the review with a specific user.

- **rating** (Integer): The rating given by the user, typically on a scale of 1 to 5.

- **review_text** (Text): The written review provided by the user.

- **review_date** (Datetime): The date and time when the review was submitted.

4 Conclusion

The database schema for the E-Commerce platform is designed to efficiently manage and store all relevant data, ensuring that all operations, from user management to product inventory, can be handled effectively. This schema supports the platform's ability to scale and adapt to growing business needs.