

The SQL code above creates multiple tables for an e-commerce database. Each table is described below:

1. admin: This table stores information about the site administrators. The columns in this table are:
 - a. adminID: an integer that serves as a primary key and is automatically incremented with each new entry.
 - b. username: a varchar(10) that stores the username of the administrator.
 - c. pass: a varchar(20) that stores the password of the administrator.
2. cart: This table stores information about items in a user's cart. The columns in this table are:
 - a. userID: an integer that stores the user's id.
 - b. total_cost: an integer that stores the total cost of items in the cart. This column has a default value of 0.
 - c. productID: an integer that stores the product id of the items in the cart.
 - d. quantity: an integer that stores the quantity of the items in the cart. This column has a default value of 1.

The table also has multiple foreign keys and constraints to ensure the validity of data.

3. category: This table stores information about different categories of products. The columns in this table are:
 - a. categoryID: an integer that serves as a primary key and is automatically incremented with each new entry.
 - b. category_name: a varchar(50) that stores the name of the category.
 - c. info: a varchar(50) that stores general information about the category. This column has a default value of null.
4. coupons: This table stores information about the different coupons available on the site. The columns in this table are:
 - a. couponID: a char(10) that serves as a primary key and stores the id of the coupon.
 - b. discount: an integer that stores the discount offered by the coupon. This column has a default value of 0.
 - c. expiry: a date that stores the expiration date of the coupon.
 - d. is_used: a tinyint(1) that stores whether the coupon has been used or not. This column has a default value of 0.

The table also has a constraint to ensure the discount is greater than 0.

5. my_orders: This table stores information about items in a user's order. The columns in this table are:
 - a. orderID: an integer that stores the order id.

- b. productID: an integer that stores the product id of the items in the order.
 - c. quantity: an integer that stores the quantity of the items in the order. This column has a default value of 1.
 - d. cost: an integer that stores the cost of the items in the order. This column has a default value of 0.
6. order: This table store the details regarding order.
- a. orderID is the primary key and auto-increment.
 - b. paymentID is a unique key and has a foreign key relationship with the "payments" table.
 - c. couponID is a foreign key relationship with the "coupons" table.
 - d. userId is a foreign key relationship with the "user" table.
 - e. order_value has a constraint "value_check" to ensure the value is always positive.
7. payments
- a. paymentID is the primary key and auto-increment.
 - b. payment_mode can only take values "cod", "netbanking", and "upi".
 - c. paymentID should be less than 8 digits.
 - d. payment_address is set as "same as shipment" by default.
8. product
- a. productID is the primary key and auto-increment.
 - b. price and quantity have a default value of 0.
9. user
- a. userID: This is an integer column and acts as the primary key for the table. The value is set to automatically increment and cannot be null.
 - b. first_name: This is a varchar column with a length of 20 characters. The value cannot be null.
 - c. last_name: This is a varchar column with a length of 20 characters and can be null.
 - d. user_address: This is a varchar column with a length of 50 characters. The value cannot be null.
 - e. email_id: This is a varchar column with a length of 20 characters. The value cannot be null.
 - f. phone_number: This is a bigint column and cannot be null.
 - g. pass: This is a varchar column with a length of 20 characters and cannot be null.
 - h. privilege_status: This is a varchar column with a length of 10 characters. The default value is set to 'normal' and cannot be null. The comment in the code states that the value can either be 'normal' or 'pro'.
 - i. The table has 3 unique keys:

- i. `unique_phone`: This is a unique key on the 'phone_number' column to ensure that the same phone number is not used by multiple users.
- ii. `unique_value`: This is a unique key on the 'email_id' column to ensure that the same email id is not used by multiple users.
- iii. `valid_phone`: This is a constraint on the 'phone_number' column to ensure that the phone number is between 1000000000 and 10000000000.