UE21CS351A
Database Management System

MINI PROJECT USER REQUIREMENT SPECIFICATION (SRS)

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Software Requirements Specification (SRS) for eCommerce Website DBMS

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1. Introduction

1.1 Purpose: The purpose of this Software Requirements Specification (SRS) document is to provide a detailed description of the software requirements for the Database Management System (DBMS) of the eCommerce website. This document serves as a roadmap for the development team, outlining the features, functionalities, and database structure necessary for the system.

1.2 Scope: The scope of this DBMS includes support for a wide range of functionalities, encompassing client-side operations, administrative management, product catalog, order processing, user management, and more. It forms the core of the eCommerce website's operations.

2. System Overview

2.1 Components: The DBMS of the eCommerce website comprises the following key components:

- **Client-Side**: This component represents the website's frontend, providing customers with the ability to browse products, manage their cart, apply discounts, and maintain their profiles.

- **Admin Panel**: An interface designed for administrators to manage products, orders, customers, and store-related details.

- **Database**: This component is responsible for storing all relevant data, including product information, customer details, orders, and more.

3. Functional Requirements

3.1 Client-Side:

- Users can browse products and view detailed information.
- Users can add products to their cart for purchase.
- Users can manage their cart, apply coupon codes, and explore wishlists.
- Users can create and manage wishlists for future reference.
- Users have the capability to manage their profiles, including personal information and preferences.
- Users can initiate and complete the order process.

3.2 Admin Panel:

- Admins have the authority to manage products and product bundles.
- Admins can manage product-category and product-manufacturer relations.
- Admins can configure and update store details, including contact information and "about us" content.
- Admins can create, manage, and apply coupons.
- Admins can view and manage customer information and orders.
- Admins are responsible for managing payments.
- Admins have control over user accounts and can monitor total earnings.

4. Non-Functional Requirements

4.1 Performance:
- The system should efficiently handle a high volume of concurrent users.
- Critical functions should provide responses in less than 2 seconds.

4.2 Security:
- User data, such as passwords, must be securely stored using encryption methods.
- Admin accounts should have robust access controls and authentication mechanisms.

4.3 Scalability:
- The system should be designed for easy scalability to accommodate future growth.

4.4 Reliability:
- The system should incorporate backup and recovery mechanisms to address data loss scenarios.

4.5 Usability:
- The user interface should be intuitive and user-friendly to enhance the overall user experience.

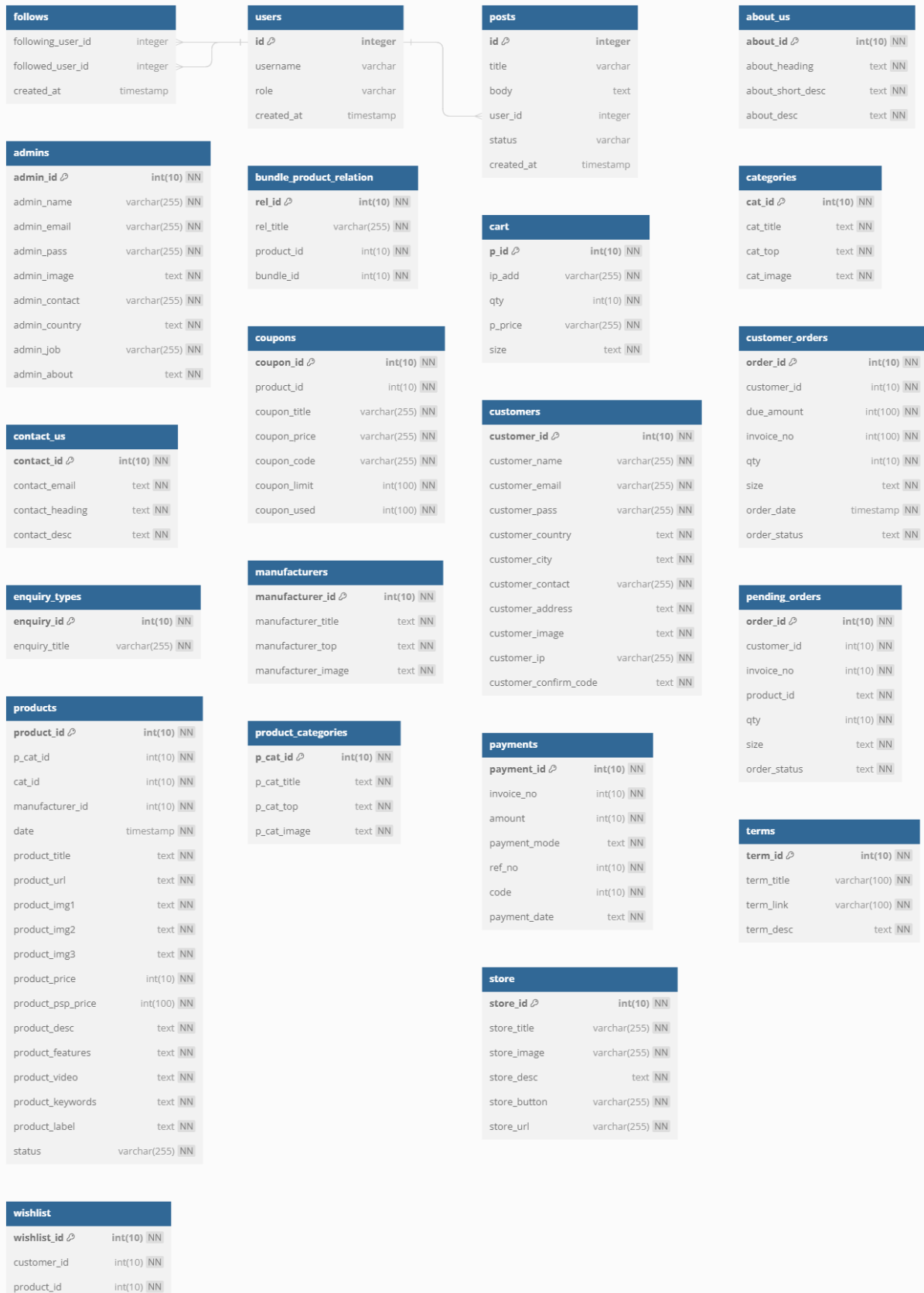## 5. User Roles

5.1 Customer:
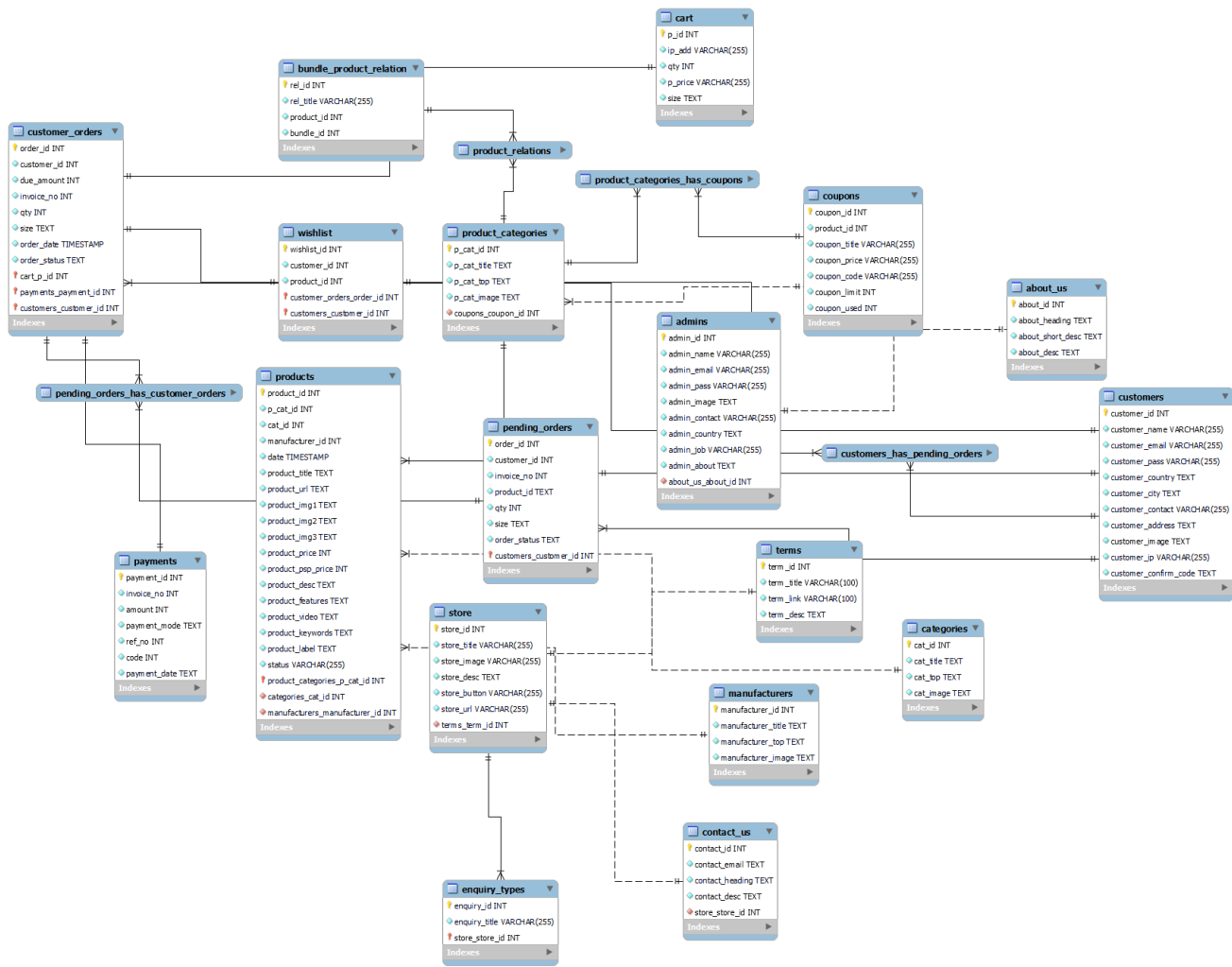Regular users who engage in shopping activities on the website.

5.2 Admin:
Administrative users responsible for managing the website's operations.

6. Data Model and ER Diagram

Relational Schema:

follows

following_user_id	integer
followed_user_id	integer
created_at	timestamp

admins

admin_id 🔑	int(10) NN
admin_name	varchar(255) NN
admin_email	varchar(255) NN
admin_pass	varchar(255) NN
admin_image	text NN
admin_contact	varchar(255) NN
admin_country	text NN
admin_job	varchar(255) NN
admin_about	text NN

contact_us

contact_id 🔑	int(10) NN
contact_email	text NN
contact_heading	text NN
contact_desc	text NN

enquiry_types

enquiry_id 🔑	int(10) NN
enquiry_title	varchar(255) NN

products

product_id 🔑	int(10) NN
p_cat_id	int(10) NN
cat_id	int(10) NN
manufacturer_id	int(10) NN
date	timestamp NN
product_title	text NN
product_url	text NN
product_img1	text NN
product_img2	text NN
product_img3	text NN
product_price	int(10) NN
product_psp_price	int(100) NN
product_desc	text NN
product_features	text NN
product_video	text NN
product_keywords	text NN
product_label	text NN
status	varchar(255) NN

wishlist

wishlist_id 🔑	int(10) NN
customer_id	int(10) NN
product_id	int(10) NN

users

id 🔑	integer
username	varchar
role	varchar
created_at	timestamp

bundle_product_relation

rel_id 🔑	int(10) NN
rel_title	varchar(255) NN
product_id	int(10) NN
bundle_id	int(10) NN

coupons

coupon_id 🔑	int(10) NN
product_id	int(10) NN
coupon_title	varchar(255) NN
coupon_price	varchar(255) NN
coupon_code	varchar(255) NN
coupon_limit	int(100) NN
coupon_used	int(100) NN

manufacturers

manufacturer_id 🔑	int(10) NN
manufacturer_title	text NN
manufacturer_top	text NN
manufacturer_image	text NN

product_categories

p_cat_id 🔑	int(10) NN
p_cat_title	text NN
p_cat_top	text NN
p_cat_image	text NN

posts

id 🔑	integer
title	varchar
body	text
user_id	integer
status	varchar
created_at	timestamp

cart

p_id 🔑	int(10) NN
ip_add	varchar(255) NN
qty	int(10) NN
p_price	varchar(255) NN
size	text NN

customers

customer_id 🔑	int(10) NN
customer_name	varchar(255) NN
customer_email	varchar(255) NN
customer_pass	varchar(255) NN
customer_country	text NN
customer_city	text NN
customer_contact	varchar(255) NN
customer_address	text NN
customer_image	text NN
customer_ip	varchar(255) NN
customer_confirm_code	text NN

payments

payment_id 🔑	int(10) NN
invoice_no	int(10) NN
amount	int(10) NN
payment_mode	text NN
ref_no	int(10) NN
code	int(10) NN
payment_date	text NN

store

store_id 🔑	int(10) NN
store_title	varchar(255) NN
store_image	varchar(255) NN
store_desc	text NN
store_button	varchar(255) NN
store_url	varchar(255) NN

about_us

about_id 🔑	int(10) NN
about_heading	text NN
about_short_desc	text NN
about_desc	text NN

categories

cat_id 🔑	int(10) NN
cat_title	text NN
cat_top	text NN
cat_image	text NN

customer_orders

order_id 🔑	int(10) NN
customer_id	int(10) NN
due_amount	int(100) NN
invoice_no	int(100) NN
qty	int(10) NN
size	text NN
order_date	timestamp NN
order_status	text NN

pending_orders

order_id 🔑	int(10) NN
customer_id	int(10) NN
invoice_no	int(10) NN
product_id	text NN
qty	int(10) NN
size	text NN
order_status	text NN

terms

term_id 🔑	int(10) NN
term_title	varchar(100) NN
term_link	varchar(100) NN
term_desc	text NN

Please refer to the Entity-Relationship (ER) diagram for a visual representation of the database structure:

This diagram illustrates the relationships among various entities, including Customers, Products, Orders, Coupons, and Admins.

7. Glossary of Terms

- **Cart:** A virtual container for users to store selected products before finalizing a purchase.
- **Wishlist:** A personalized list where users can save products for future reference.
- **Bundle:** A group of related products sold together as a package.
- **Category:** A classification for products based on their attributes.
- **Manufacturer:** The company or entity responsible for producing the products.
- **Coupon:** A discount code applied to reduce the price of products.
- **Earnings:** The cumulative revenue generated by the website.