



SCHOOL OF ADVANCED TECHNOLOGY

CAN302 Assignment 1

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Part 1: UI design

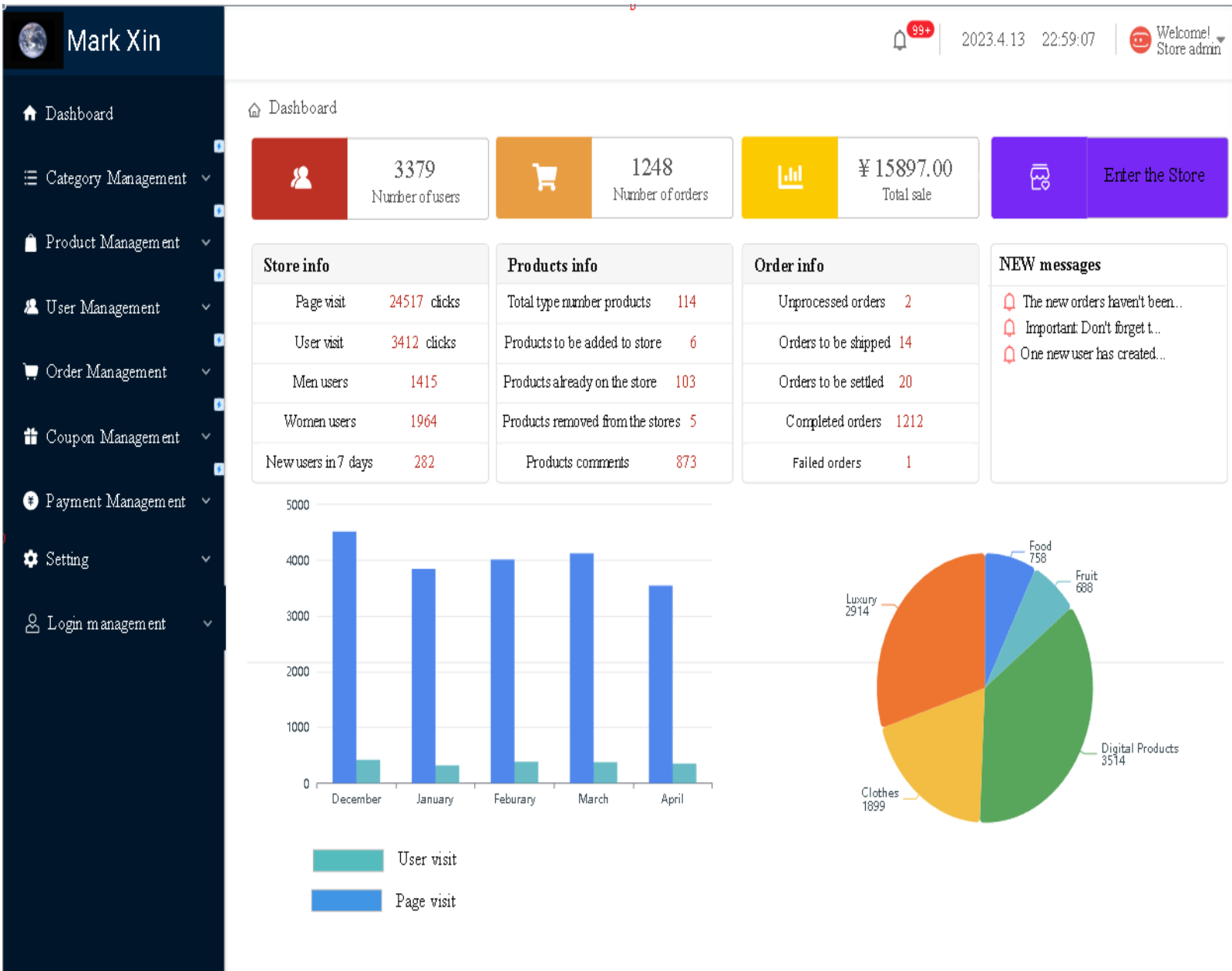
1.1 Dashboard

Here is the inter face of “Dashboard”

User can see the Navigation bar in the left.

The store info, Product info, Order info are here, too.

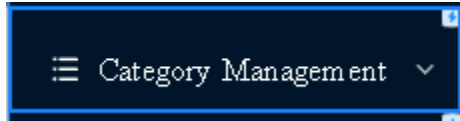
The bar charts and the pie charts demonstrate the relevant data.



1.2 Category Management

Here is the interface of the “Category Management”.

You can see the category name, rank, logo, brand, type, description (introduce the category), add time (the time that added to the store system), status (active means the category can be seen for the users, nonactive means users cannot see the category), operations (off means nonactive the category)



Users can search in the search box.

[Dashboard](#) / [Category Management](#)

Category Name

Add time

Show

<input type="checkbox"/>	Name	Rank	Logo	Brand	Type	Description	Add time	Status	Operation
<input checked="" type="checkbox"/>	Shoes	<input type="text" value="1"/>		Li Ning	Clothes	A shoe is an item that is worn on the foot. The sub-categories are leather shoes, sports shoes, high heels, boots, slippers, sandals, etc.	2023-3-27 12:21:56	Active	<input type="button" value="Off"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>
<input checked="" type="checkbox"/>	Trousers	<input type="text" value="2"/>		Nike	Clothes	A trouser is a garment worn below the waist. They can be classified as jeans, trousers, dress trousers, overalls, jumpers, etc.	2023-3-28 11:49:51	Active	<input type="button" value="Off"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>
<input checked="" type="checkbox"/>	Jacket	<input type="text" value="3"/>		Nike	Clothes	A jacket is a common garment worn on the upper body. There are different types of tops such as jackets, dual-purpose shirts, T-shirts and many more.	2023-3-28 20:34:45	Active	<input type="button" value="Off"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>
<input checked="" type="checkbox"/>	Phone	<input type="text" value="4"/>		OPPO	Digital products	Smartphones from OPPO	2023-3-29 9:15:57	Active	<input type="button" value="Off"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>
<input type="checkbox"/>	Computer	<input type="text" value="5"/>		Dell	Digital products	New computers made by Dell	2023-3-30 14:41:26	Nonactive	<input checked="" type="button" value="On"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>
<input checked="" type="checkbox"/>	Camera	<input type="text" value="6"/>		SONY	Digital products	SONY's new camera with a large aperture and pixels	2023-3-31 15:20:26	Active	<input type="button" value="Off"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>
<input checked="" type="checkbox"/>	Washing machine	<input type="text" value="7"/>		Siemens	Home Appliances	A washing machine is a cleaning appliance that uses electrical energy to produce a mechanical action to wash clothes	2023-4-8 18:52:43	Active	<input type="button" value="Off"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>
<input checked="" type="checkbox"/>	Refrigerator	<input type="text" value="8"/>		Siemens	Home Appliances	A refrigerator is a refrigeration equipment that maintains a constant low temperature and keeps food or other items at a constant low temperature.	2023-4-9 14:28:17	Active	<input type="button" value="Off"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>
<input checked="" type="checkbox"/>	Ring	<input type="text" value="9"/>		Tiffany	Luxury	A ring is a small ring that is placed on the finger for commemorative or decorative purposes and is made of metal, gemstones, plastic and other materials.	2023-4-11 13:21:06	Active	<input type="button" value="Off"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>
<input type="checkbox"/>	Necklace	<input type="text" value="10"/>		SWAROVSKI	Luxury	A necklace is a chain-shaped piece of jewellery that hangs around the neck and is usually made of metal, precious stones, plastic, etc.	2023-4-13 8:19:08	Nonactive	<input checked="" type="button" value="On"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>

Page 1/10, total 98 categories

< 1 2 3 4 5 >

10/page

Jump page

Click the yellow button “+ create new” to jump to a new page to create a new category. User need to fill in the relevant information about the category.

+ Create new

Dashboard / Category Management / + Create new category

Create a new category

*Category Name:

*Category Rank:

*Brand:

*Logo:

Upload

*Type:

Description:

0/500

Status: ☒ Active ☐ Nonactive

Click the blue button “ update” to edit the information of category.

Update

Dashboard / Category Management / Update category

Update category

*Category Name:

*Category Rank:

*Brand:

*Logo:

Replace

*Type:

Description:

26/500

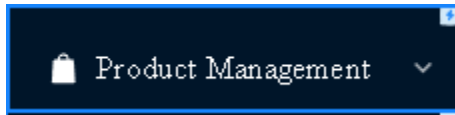
Status: ☒ Active ☐ Nonactive

“Delete” is similar.

1.3 Product Management

Here is the interface of the “Product Management”.

You can see the product number, product name, price, brand, category, add time (the time that added to the store system), stock, status (active means the category can be seen for the users, nonactive means users cannot see the category), operations (off means nonactive the category)













Users can search in the search box

Dashboard / Product Management

Product name: Add time:

Product List

Show

<input type="checkbox"/>	Product number	Product name	Price	Picture	Category	Add time	Stock	Status	Operations
<input checked="" type="checkbox"/>	30001	Apple	¥5		Fruit	2023-4-1 9:12:46	800	● Active	<input type="button" value="Off"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>
<input checked="" type="checkbox"/>	30002	Pear	¥6		Fruit	2023-4-1 11:21:56	800	● Active	<input type="button" value="Off"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>
<input type="checkbox"/>	30003	Peach	¥10		Fruit	2023-4-1 12:31:56	680	● Active	<input type="button" value="Off"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>
<input type="checkbox"/>	30004	Strawberry	¥23		Fruit	2023-4-2 15:21:34	1500	● Nonactive	<input checked="" type="button" value="On"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>
<input checked="" type="checkbox"/>	30005	Watermelon	¥40		Fruit	2023-4-2 15:28:44	80	● Nonactive	<input checked="" type="button" value="On"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>
<input type="checkbox"/>	30006	Banana	¥4		Fruit	2023-4-2 15:25:34	1000	● Active	<input type="button" value="Off"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>
<input type="checkbox"/>	30007	Mango	¥15		Fruit	2023-4-2 15:28:01	900	● Active	<input type="button" value="Off"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>
<input type="checkbox"/>	30008	Orange	¥8		Fruit	2023-4-3 12:26:01	600	● Active	<input type="button" value="Off"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>
<input type="checkbox"/>	30009	Cherry	¥50		Fruit	2023-4-3 12:28:39	1200	● Nonactive	<input checked="" type="button" value="On"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>
<input type="checkbox"/>	30010	Grape	¥20		Fruit	2023-4-3 13:38:01	2000	● Nonactive	<input checked="" type="button" value="On"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>

Page 1/70, total 692 products

< 2 3 4 5 > Jump page

Click the yellow button “+ Insert” to jump to a new page to insert a new product. User need to fill in the relevant information about the product.

+ Insert

Dashboard / Product management / + Insert Product

Product List

- Store list
- Fruit
- Clothes
- Digital product
 - Phone
 - Camera

Insert product

*Product name:

*Category:

*Product number: Place: Materials: Brand:

Weight: Units:

*Price: *Stock:

Key words:

Description: 0/100

*Picture

+

Upload

at most 10 pictures

Status: ☒ Active ☐ Nonactive

Comment? ☒

Click the blue button “Update” to edit the information of products.

Update

Dashboard / Product management / + Update Product

Product List

- Store list
- Fruit
- Clothes
- Digital product
 - Phone
 - Camera

Update product

*Product name:

*Category:

*Product number: Place: Materials: Brand:

Weight: Units:

*Stock:


Key words:

Description: 0/100

*Picture

+

Upload



at most 10 pictures

Status: ☒ Active ☐ Nonactive

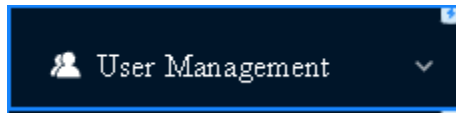
Comment? ☒

“Remove” page is similar to the two pages. Remove the stock.

1.4 User Management

Here is the interface of the “User Management”.

You can see the user unique ID, user name, gender, phone number, registered time, shipping address, payment methods (Alipay, WeChat, PayPal, Visa, Union pay) and order history.



can using name/ID/phone number to search users.

Dashboard / User Management

User : Registered time :

show

<input type="checkbox"/>	ID	Name	Gender	Phone number	Registered time	Shipping address	Pay methods	Order history	Operations
<input checked="" type="checkbox"/>	A00001	Mark	Male	13512398755	2023 3 23 9:58:17	Beijing, Haidian	Alipay	Click to view	<input type="button" value="Off"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>
<input checked="" type="checkbox"/>	A00002	Allen	Male	13452498142	2023 3 23 11:09:17	Shanghai, pudong	Wechat	Click to view	<input type="button" value="Off"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>
<input checked="" type="checkbox"/>	A00003	Judy	Female	13512378778	2023 3 23 12:12:58	Shanghai, jingan	Wechat	Click to view	<input type="button" value="Off"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>
<input type="checkbox"/>	A00004	Mike	Male	15998715245	2023 3 23 18:45:23	Suzhou, huqiu	Alipay	Click to view	<input type="button" value="✓"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>
<input type="checkbox"/>	A00005	Amy	Female	13517648235	2023 3 23 20:18:44	Suzhou, wuzhong	Paypal	Click to view	<input type="button" value="✓"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>
<input checked="" type="checkbox"/>	A00006	Tracy	Female	17854826945	2023 3 23 21:31:05	Suzhou, wuzhong	Wechat	Click to view	<input type="button" value="Off"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>
<input checked="" type="checkbox"/>	A00007	Reyna	Female	13574121457	2023 3 24 8:24:57	Suzhou, gusu	Alipay	Click to view	<input type="button" value="Off"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>
<input checked="" type="checkbox"/>	A00008	David	Male	15532585856	2023 3 24 10:18:59	Zhengzhou, jinshui	Visa	Click to view	<input type="button" value="Off"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>
<input checked="" type="checkbox"/>	A00009	Jennie	Female	13500047815	2023 3 24 17:35:44	Zhengzhou, erqi	Wechat	Click to view	<input type="button" value="Off"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>

Page 1/380, total 3379 users

< 2 3 4 5 > page

Click the blue button “✎ Alter” to alter user related info.

✎ Alter

Can alter payment methods, shipping address, order history here. ↓

Dashboard / User Management / Alter user info

Alter user info

*User Name :

Mark

*User ID :

A00001


*Gender :


Male


*Phone number :


13512398755


*Pay methods:


☒


☐


☐


☐


☐

*Shipping address :

Beijing, Haidian

*Order history :

This user cost ￥10 to buy a pear at 2023 4 10 12:01:05, using Alipay. The address is Beijing, Haidian.

This user cost ￥6999 to buy a computer at 2023 4 12 16:15:49, using Alipay. The address is Beijing, Haidian.

126/3000

Save

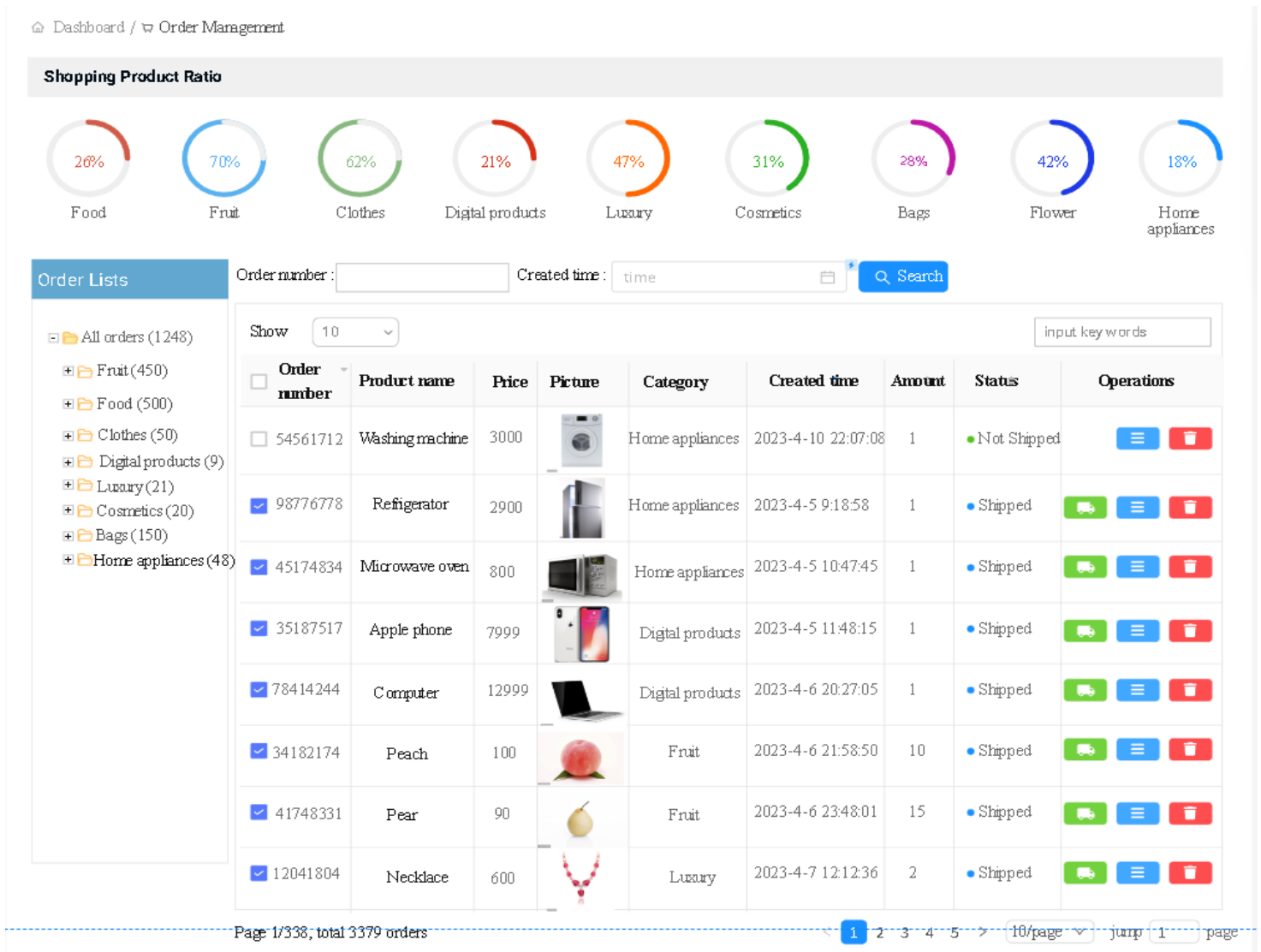
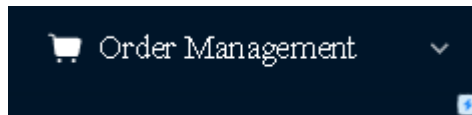
Cancel

1.5 Order Management

Here is the interface of the “Order Management”.

User can see the all orders lists on the left. In the top, user can see the shopping product ratio straightly through the pie charts.

About the detailed info, user can see the order number, product name, price, picture, and amount. “Not shipped” means the products have not yet been delivered to the courier. “Shipped” means the products have been delivered to the courier, user can click the green car icon to view the logistics information. User can also click the blue icon to edit the orders information.



Click the blue icon to update the order information like below.

Dashboard / Order Management / Update Order

Order List

Orders Lists

Completed (1248)

To be settled (20)

To be shipped (14)

Unprocessed (2)

Failed (1)

Update Order

*Order number:

54561712

*Prodcut name:

Washing machine

*Category:

Home appliances

*Amount:

1

Brand:

Simens

*Shipping address:

Bihailantian, Building 3, Jinshui Distinct, Zhengzhou, Henan Province

*Picture

at most 10 pictures

*Status:

Shipped

Not Shipped

Save

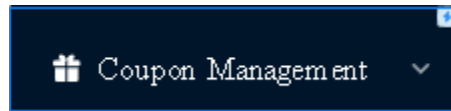
Cancel

10

1.6 Coupon Management

Here is the interface of the “Coupon Management”.

There are seven types of the users’ grade that you can see below.



Dashboard / Coupon Management

Users Grade:	Comon users	Bronze users	Silver users	Gold users	Platinum users	Jadeite users	Diamond users	Total
Number of Users :	1000	379	800	500	400	186	114	3379

Users Grade:	Comon users	Bronze users	Silver users	Gold users	Platinum users	Jadeite users	Diamond users
Coupon credits	0~99	100~299	300~599	600~999	1000~1499	1500~2999	3000+

show

5

Search

<input type="checkbox"/>	ID ▾	Name	Gender ▾	Phone number	Registered time	Grade	Coupon credits	Status	Operations
<input type="checkbox"/>	A00001	Mark	Male	13512398755	2023 3 23 9:58:17	Diamond user	5495	● Normal	<div><div></div><div></div></div>
<input type="checkbox"/>	A00002	Allen	Male	13452498142	2023 3 23 11:09:17	Jadeite user	2480	● Normal	<div><div></div><div></div></div>
<input type="checkbox"/>	A00003	Judy	Female	13512378778	2023 3 23 12:12:58	Gold user	794	● Normal	<div><div></div><div></div></div>
<input type="checkbox"/>	A00004	Mike	Male	15998715245	2023 3 23 18:45:23	Jadeite user	2133	● Normal	<div><div></div><div></div></div>
<input type="checkbox"/>	A00005	Amy	Female	13517648235	2023 3 23 20:18:44	Silver user	463	● Normal	<div><div></div><div></div></div>

Coupon Policy:

1. Users will add credits after buying products. ¥ 1 = 1 credit
2. Users can take attendance in the store to add credits. Once take attendance can gain 0.5 credit.
3. common users has no discount. Bronze users can get a 95 % off coupon ticket per month. Silver users can get two 95% off coupon tickets per month. Gold users can get a 90% off coupon ticket per month. Platinum users can get a 85% off coupon ticket per month. Jadeite users can get two 85% off coupon tickets per month. Diamond users can get a 80% off coupon ticket and a 85% off coupon tickets per month.
4. The coupon credits will update every year.
5. All rights reserved by the store.

Page 1/676, total 3379 users

< 1 2 3 4 5 > 5/page jump 1 page

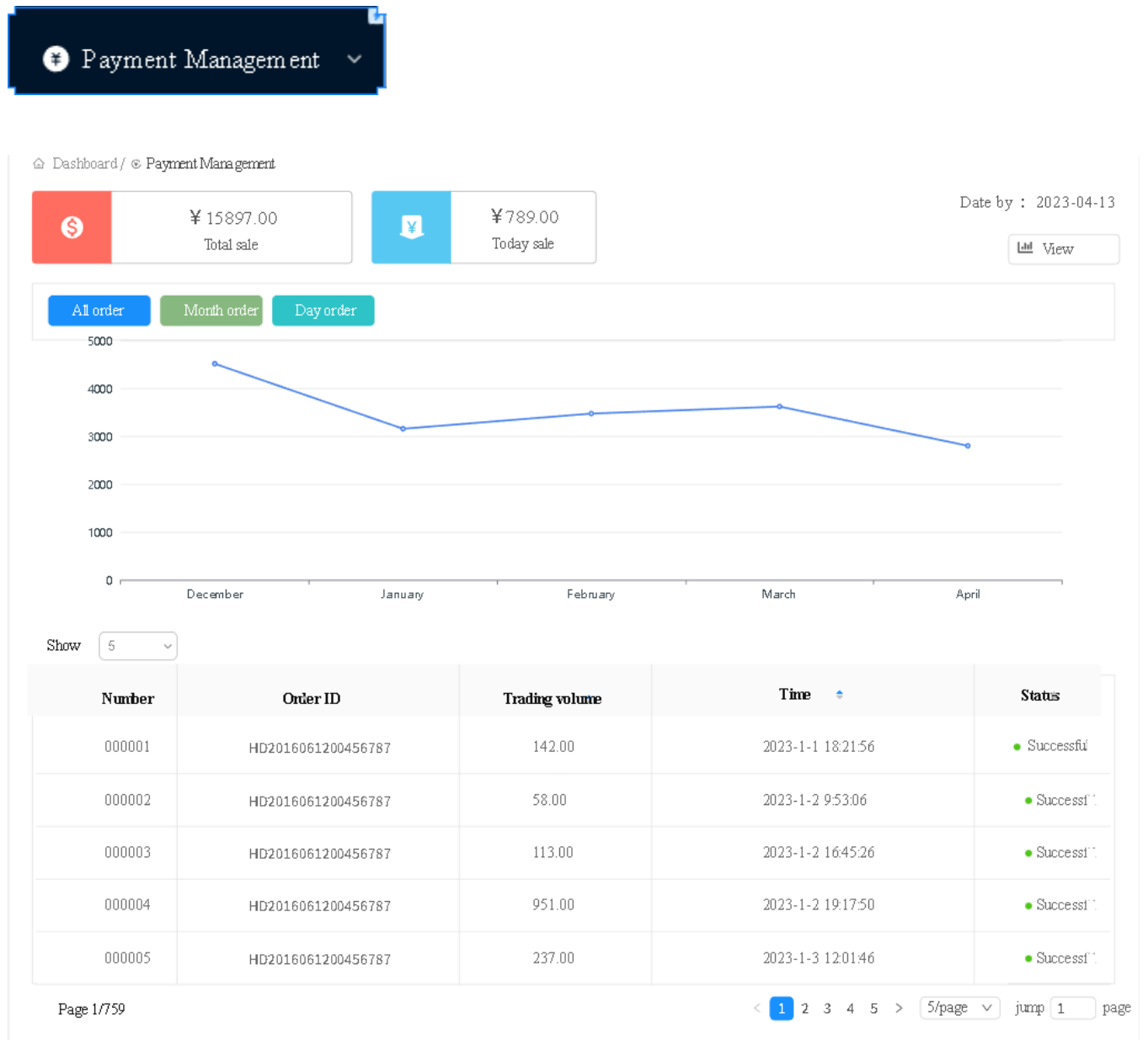
Users can gain coupon credits according to the coupon policy to improve their user grade.

Different users grade can get different coupon discount when buying the products.

1.7 Payment Management

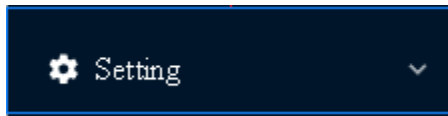
Here is the interface of the “Payment Management”.

Users can view specific sales here. It is also possible to switch between total orders, monthly orders and daily orders.



1.8 Setting

Here is the interface of the “Setting”.



Users can change the store name, store password, the language and the font of the store system.

They can also upload the picture and give store description so that customers can know what products the store sell.

It can also edit the store status, “Open” means normal business hours, “Close” means temporarily closed.

Dashboard / Setting

Change Setting

*Store name: Mark Xin

*Store account:


*Account password:

*Language: English

*Font: Times New Roman

*Picture:

Replace



Payment methods: Alipay

*Here, users need to upload the picture of store info and operating certificate.

*Privacy:

*Invoices:

Store Description: A wide range of productss including clothes, food, fruit, electrical appliances, digital products and more...

127/1000

Store Status: Open ☒ Close ☐

Save

Cancel

13

1.9 Login Management

Login management

Dashboard / Login Management

Welcome to the store system!

*User Account:

input account or phone number

*User Password:

input password

I have read and agreed the privacy policy.

Login

Sign up

Forget password

Dashboard / Login Management / Update profile

Update profile

*User Account:

*User Name:

Mark

*User Password:

123456

*Phone number:

Email:

*Role:

Store admin

Save

Cancel

Part 2: Database Design

2.1 Admins

Table: admins

Brief Function: Store admin account information.

Structure:

id (Primary Key, Integer, Auto-increment)

name (VARCHAR)

email (VARCHAR, UNIQUE)

password (VARCHAR)

created_at (Time)

updated_at (Time)

2.2 Category

Table: Category

Brief Function: Store product categories.

Structure:

id (INT, Primary Key, AUTO_INCREMENT)

name (VARCHAR)

description (TEXT)

image (VARCHAR)

parent_id (INT, Foreign Key to categories.id, NULLABLE)

created_at (DATETIME)

updated_at (DATETIME)

2.3 Products

Brief Function: Store product information.

Structure:

id (INT, Primary Key, AUTO_INCREMENT)

category_id (INT, Foreign Key to categories.id)

name (VARCHAR)

description (TEXT)

price (DECIMAL)

image (VARCHAR)

stock (INT)

weight (DECIMAL)
is_active (BOOLEAN)
created_at (DATETIME)
updated_at (DATETIME)

2.4 Users

Table: users

Brief Function: Store customer information.

Structure:

id (INT, Primary Key, AUTO_INCREMENT)
name (VARCHAR)
email (VARCHAR, UNIQUE)
password (VARCHAR)
phone (VARCHAR)
created_at (DATETIME)
updated_at (DATETIME)

2.5 Orders

Table: orders

Brief Function: Store order information.

Structure:

id (INT, Primary Key, AUTO_INCREMENT)
customer_id (INT, Foreign Key to customers.id)
status (ENUM: 'processing', 'shipped', 'completed', 'canceled')
shipping_address_id (INT, Foreign Key to addresses.id)
billing_address_id (INT, Foreign Key to addresses.id)
created_at (DATETIME)
updated_at (DATETIME)

2.6 Coupon

Table: coupons

Brief Function: Store coupon information.

Structure:

id (INT, Primary Key, AUTO_INCREMENT)
code (VARCHAR, UNIQUE)

type (ENUM: 'fixed_amount', 'percentage', 'free_shipping')

value (DECIMAL)

start_date (DATETIME)

end_date (DATETIME)

usage_limit (INT, NULLABLE)

min_order_value (DECIMAL, NULLABLE)

is_active (BOOLEAN)

created_at (DATETIME)

updated_at (DATETIME)

2.7 Payment

Table: payment

Brief Function: Store customer payment method information.

Structure:

id (INT, Primary Key, AUTO_INCREMENT)

customer_id (INT, Foreign Key to customers.id)

type (ENUM: 'credit_card', 'bank_transfer', 'paypal', etc.)

details (TEXT)

is_primary (BOOLEAN)

created_at (DATETIME)

updated_at (DATETIME)

2.8 Setting

Table: setting

Brief Function: Store the store system information.

Structure:

id (Primary Key, Integer, Auto-increment)

store_name (Text)

contact_email (Text)

contact_phone (Text)

shipping_policy (Text)

logo_url (Text)

primary_color (Text)

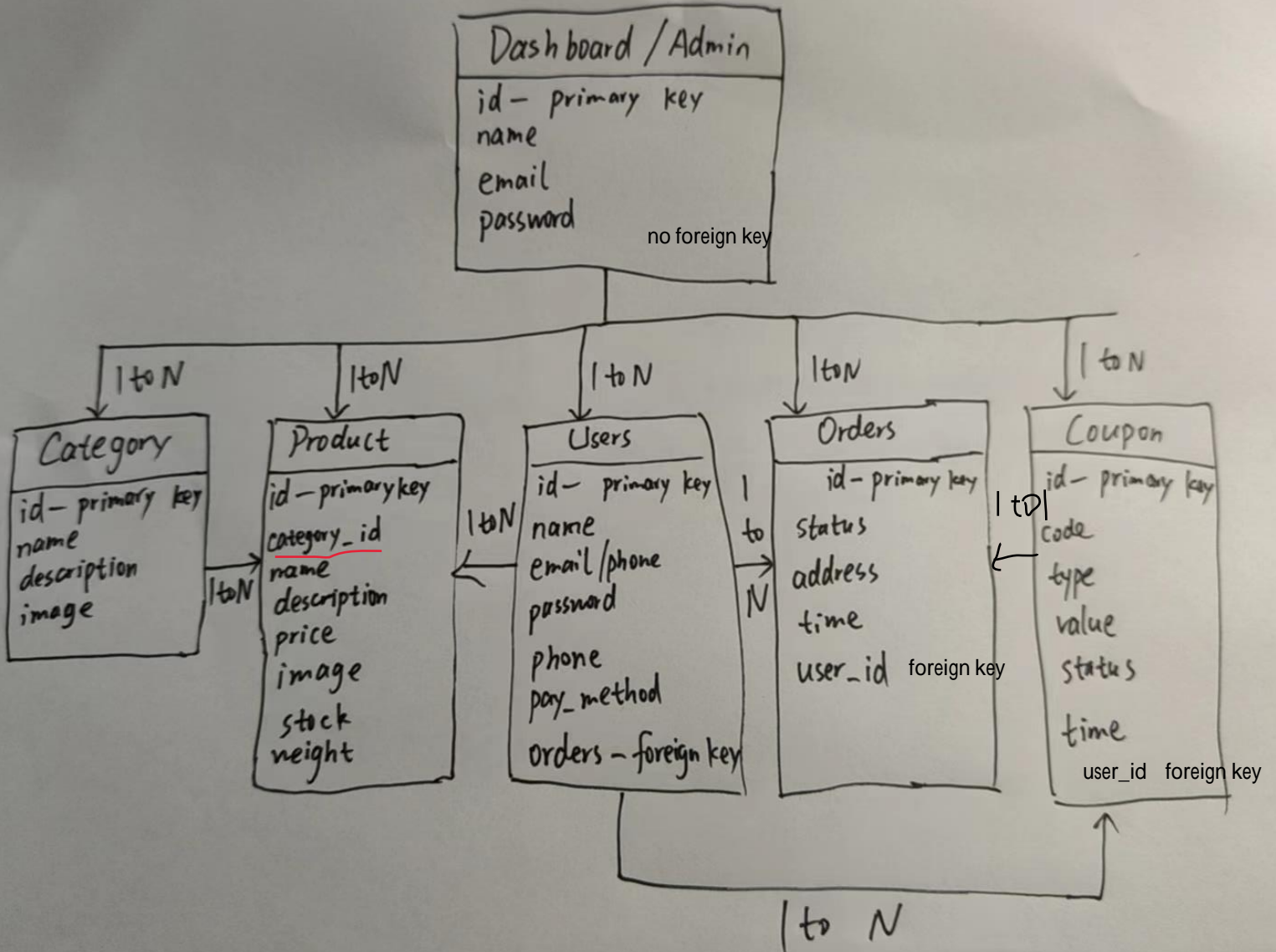
secondary_color (Text)

font (Text)

created_at (Timestamp)

updated_at (Timestamp)

2.9 ER diagram



Part 3: A short report (within 2 pages)

Dashboard:

The Dashboard function retrieves and displays key performance indicators (KPIs) and data visualizations using information from multiple database tables.

Login Management:

The Login Management function primarily interacts with the 'users' table. It allows admins to view and update their profile information, including name, email, and password.

Category Management:

This function is responsible for managing product categories and directly interacts with the 'categories' table. Admins can create, update, and delete categories in this table.

Product Management:

Product Management involves managing product information and is linked to the 'products' and 'categories' tables. Admins can view, update, insert, and remove products. The 'category_id' field in the 'products' table establishes a relationship with the 'categories' table.

User Management:

The User Management function handles user-related data and mainly interacts with the 'users' table. Admins can view and update user information, such as payment methods, shipping addresses, and order history.

Order Management:

This function deals with managing orders and directly interacts with the 'orders', 'order_items', 'products', and 'users' tables. Admins can view and update order information, and search or filter orders based on specific criteria.

Coupon Management:

Coupon Management is related to the 'coupons' and 'order_coupons' tables. Admins can create, update, and delete coupons, as well as manage their usage limits and expiration dates.

Payment Management:

The Payment Management function interacts with the 'payments', 'orders', and 'users' tables. It displays a list of transactions, their amounts, and payment methods, and allows admins to change payment methods for the store.

Settings:

Settings management involves updating store information and customizations, which are stored in the 'settings' table. Admins can change store name, contact details, shipping policies, and appearance customizations like logo, colors, and fonts.

Conclusion:

This report has outlined the relationships between the different functions of our e-commerce solution and the corresponding database tables. Understanding these connections allows for a more efficient and streamlined development process, ultimately resulting in a robust and effective e-commerce application.

Finished