

ELEC5619

Project Name: Money Saver

Date: 5th Sep 2021

Group Member

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1. Introduction

For merchants, discounted products can greatly attract people, which is the fastest and most effective way to promote sales and help to cultivate and retain existing customers(Rundle, 2019). The Internet's efficient information sharing channels and various platforms expand this advantage. However, product discount information of different brands is often distributed on different websites. Under the product demand of the same catalog, how can consumers buy the product they like at the most appropriate price? It is difficult for consumers to find the answer through a single browse online.

For the same product, consumers tend to choose the one with the larger discount quantity, which can reduce their spending and consumption(Kardes, 2019). But for consumers, if they want to search for a product, they need to go to the websites of different merchants to check whether there is discount information on this product. Consumers need to do some tedious searching: first, they need to find out which shops sell the item they needed; then they need to check the price of the product and whether there is a discount, and finally compare the price of the same item sold by different shops through switching between different pages. This greatly reduces the user's use efficiency, and the final result obtained by the user is not necessarily optimal. When users search for other products again, they have to go through the same cumbersome steps, which not only wastes time but also wastes energy.

To make it easier for them to find discounted goods faster. We made a website to collect the discount information of different shops and

summarize the information. Consumers can use just the one site to search for all the discount information on the products they want.

2. Background

Discounting is a promotional tool, and people prefer to sell discounted items rather than original priced items.(Lee, 2013) Due to the fast pace of society and the increasing pressure of life, many people do not have time or are too lazy to go to the supermarket.(McIntyre, 2016) Besides, people receive a lot of emails about discounts on various products every day, but it is difficult to accurately and quickly find the specific discount information we need.(Perera, 2018) In addition, the stores that spend the most on advertising will always occupy the top of our search results, which means that it is difficult for us to find 'real deals'.

Therefore, people need a well-designed application to get the latest vouchers and discount-related information on different shopping platforms (online or physical stores) to get cheaper products in a more efficient way. Our system will provide a solution for people who don't have time to go to supermarkets to provide a platform to know what goods are on sale now, not only saving their time, but also saving them money.

3. Functional requirements

There are three roles in the system, the first one is the customer, the second is shop admin, and the last one is super admin.

1. A new user can register with any of two roles, one is customer, and the other one is shop admin.
2. A customer with an account must be able to log in to the system by entering a username and password.
3. The customer can edit personal information on the personal information page, such as changing the email address.
4. The customer can query all the products in the system, and the information of the products will be displayed on the page.
5. The customer should be able to use the filter function to find product information within the scope.
6. The customer can query the information of all coupons in the system.
7. Customers should be able to use the filter function to find coupons within the target range.
8. Customers can add red hearts to their favorite products, and the number of likes of one product can be seen by other users.
9. Customers can collect their favorite products.
10. The customer can comment on the product, and the content of the comment can be seen by other users.
11. The shop admin must be able to add, delete and update products info in the system.
12. The shop admin must be able to search the products in the system.
13. When the customer clicks on a product, the detailed information of the product will be displayed.
14. When a customer's favorite item changes in price, they will receive a reminder.
15. The customer can see the hot commodities in the system, as well as the number of reduced-price commodities in the past 24 hours.

16. The super admin can add, delete and modify the coupons in the system.
17. The super admin can query the coupons in the system.
18. The customer can query all the markets in the system, and the information of the markets will be displayed on the page.
19. When the customer clicks on a market, it will display all the reduced-price commodities in the market.
20. The super admin can add, delete and modify the markets in the system.
21. The super admin can query the markets in the system.
22. The customer can see the category of the product.
23. Customers can compare the prices of the two products before buying.

4. Non-functional requirements

1. The Money Saver system must allow more than 1000 people online simultaneously.
2. The response time of the Money Saver system must not exceed three seconds.

No one wants to use software with excessively long waiting time, which means that social efficiency will be greatly reduced.

3. The system allows up to three outages per year.

The platform may encounter technical failures, but we must try our best to reduce the outages and their impact

4. The platform should have a backup database to store all user information and text messages, posts and comments within six months.

Data backup allows the development team to effectively respond to internal or external malicious attacks.(such as clearing the database and tampering with dat

5. The Money Saver system should work on most mainstream mobile phones.

The more types of mobile devices supported, the more potential markets for the software.

6. The Money Saver must protect the privacy of users' accounts. should use the encryption method on the user's communication.

7. The Money Saver system should allow user to choose to remain anonymous when commenting

8. The Money Saver system should allow and record the user to collect or like more than 30 goods and save.

9. The Money Saver system should be able to be used in different environments like Windows or Mac.

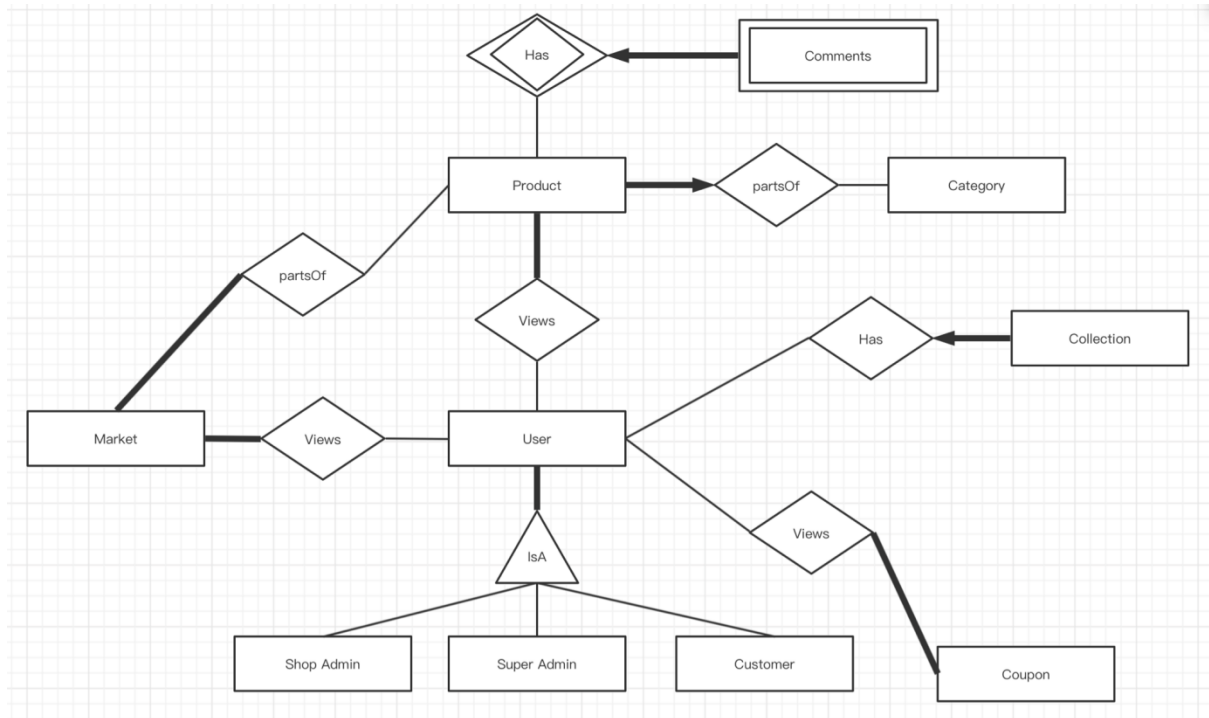
10. The Money Saver system should finish notified action in 5 seconds after the admin changes the data.

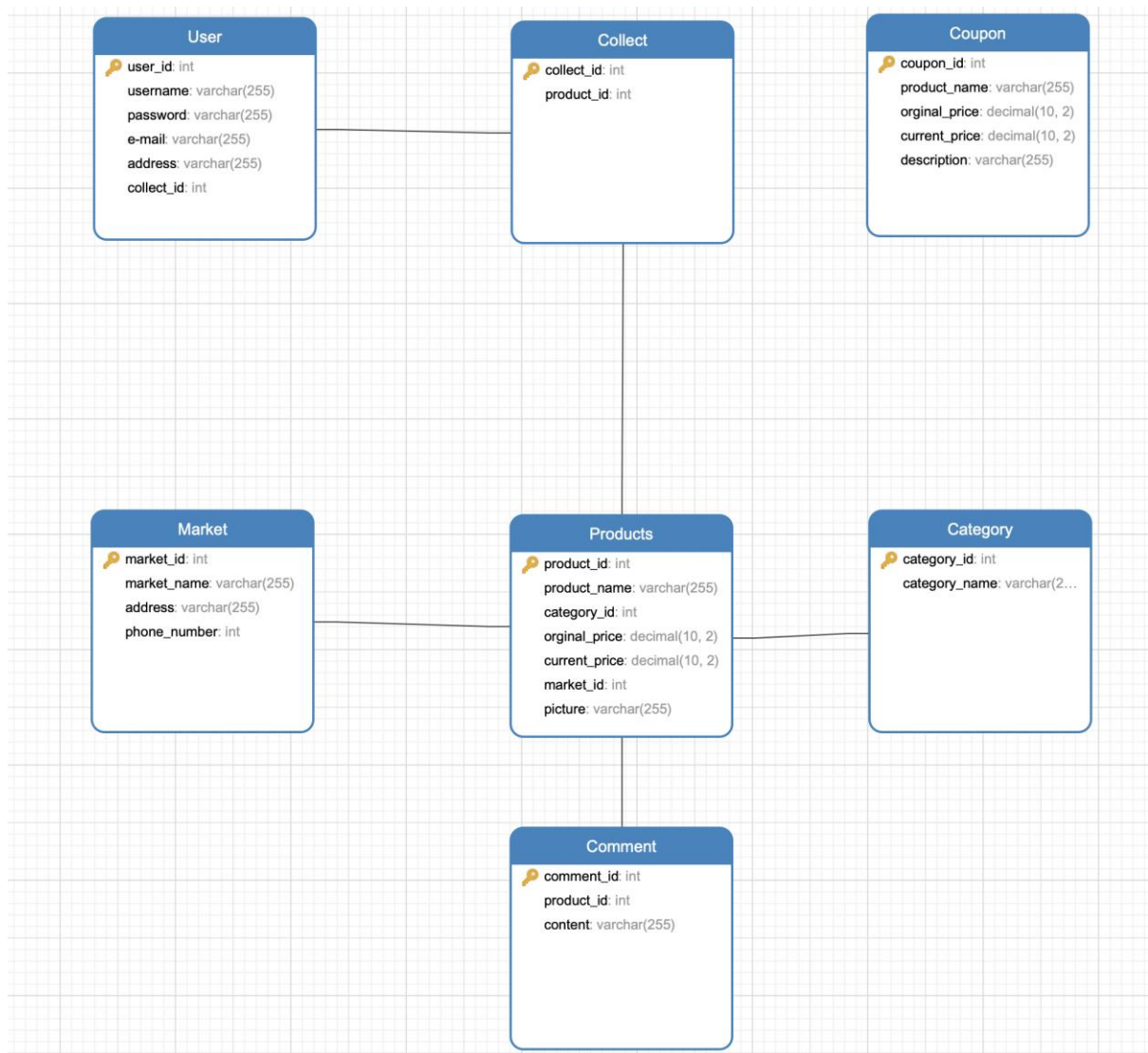
11. The Money Saver system should be available to use 24 hours every day.

12. The Money Saver system should make it easy to understand how to operate without guidance.

5. Database design

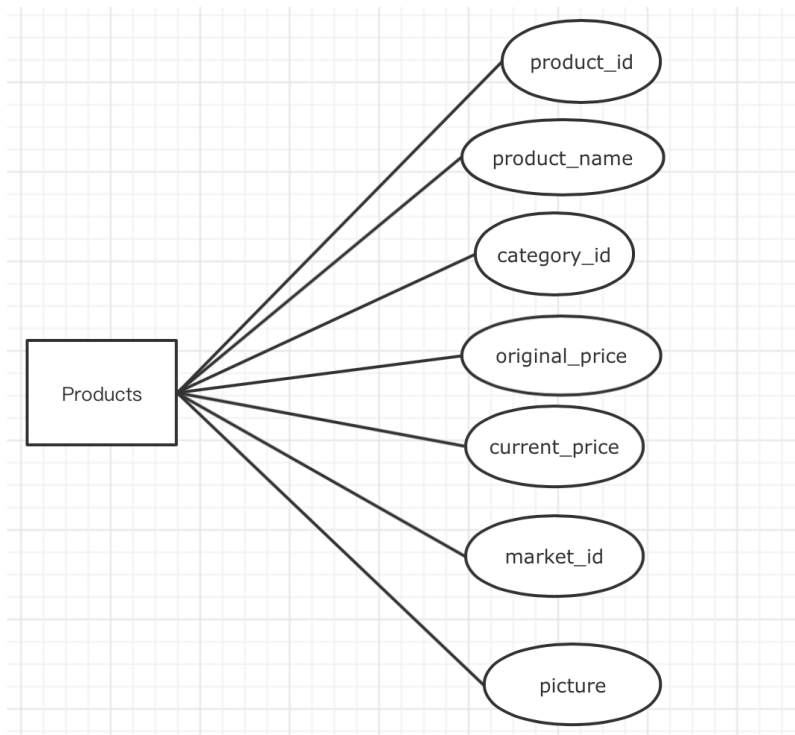
1.ERD



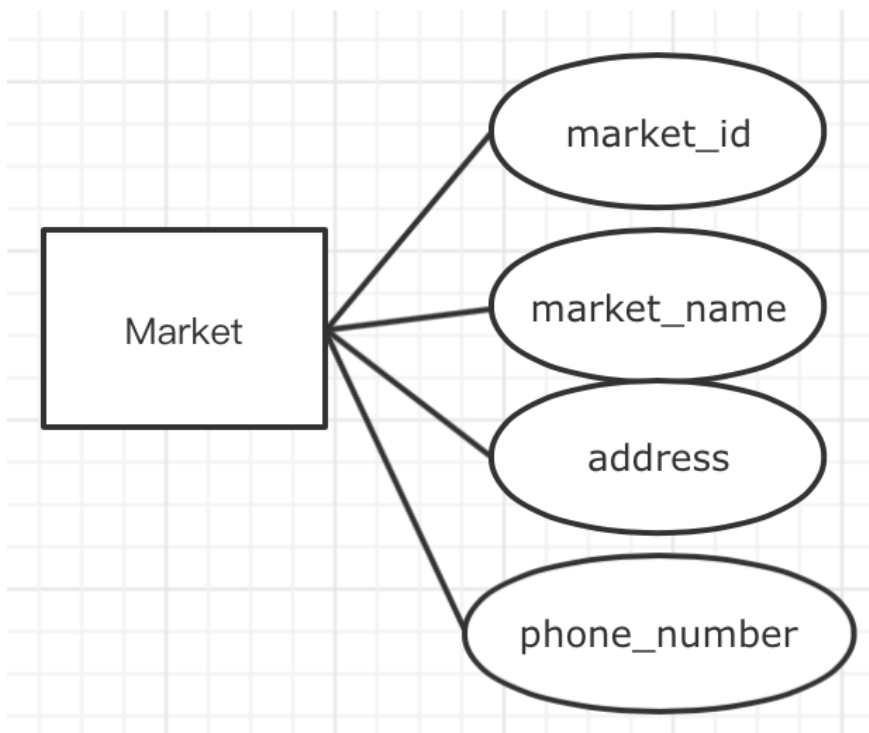


Separate tables:

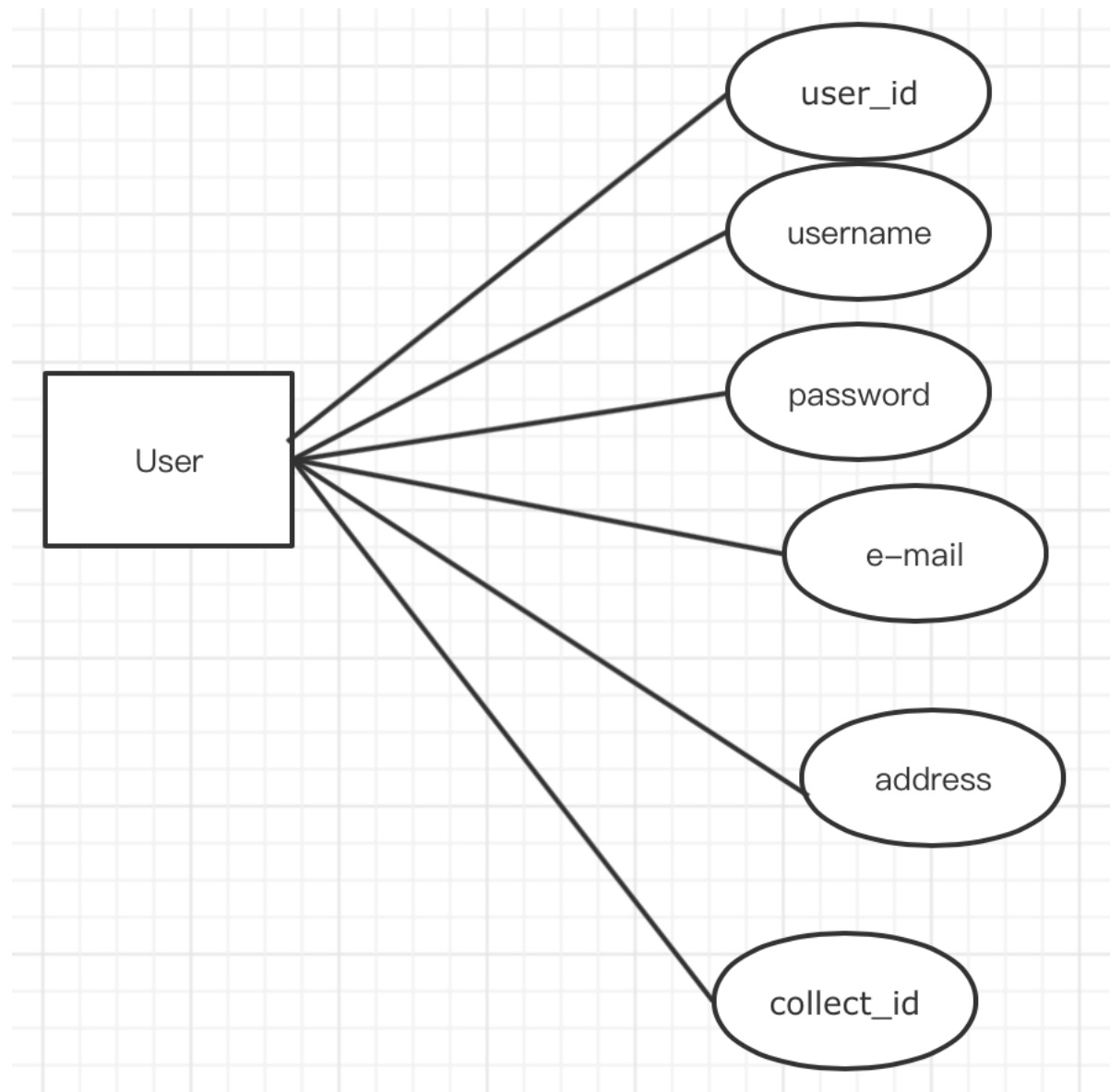
1. Product



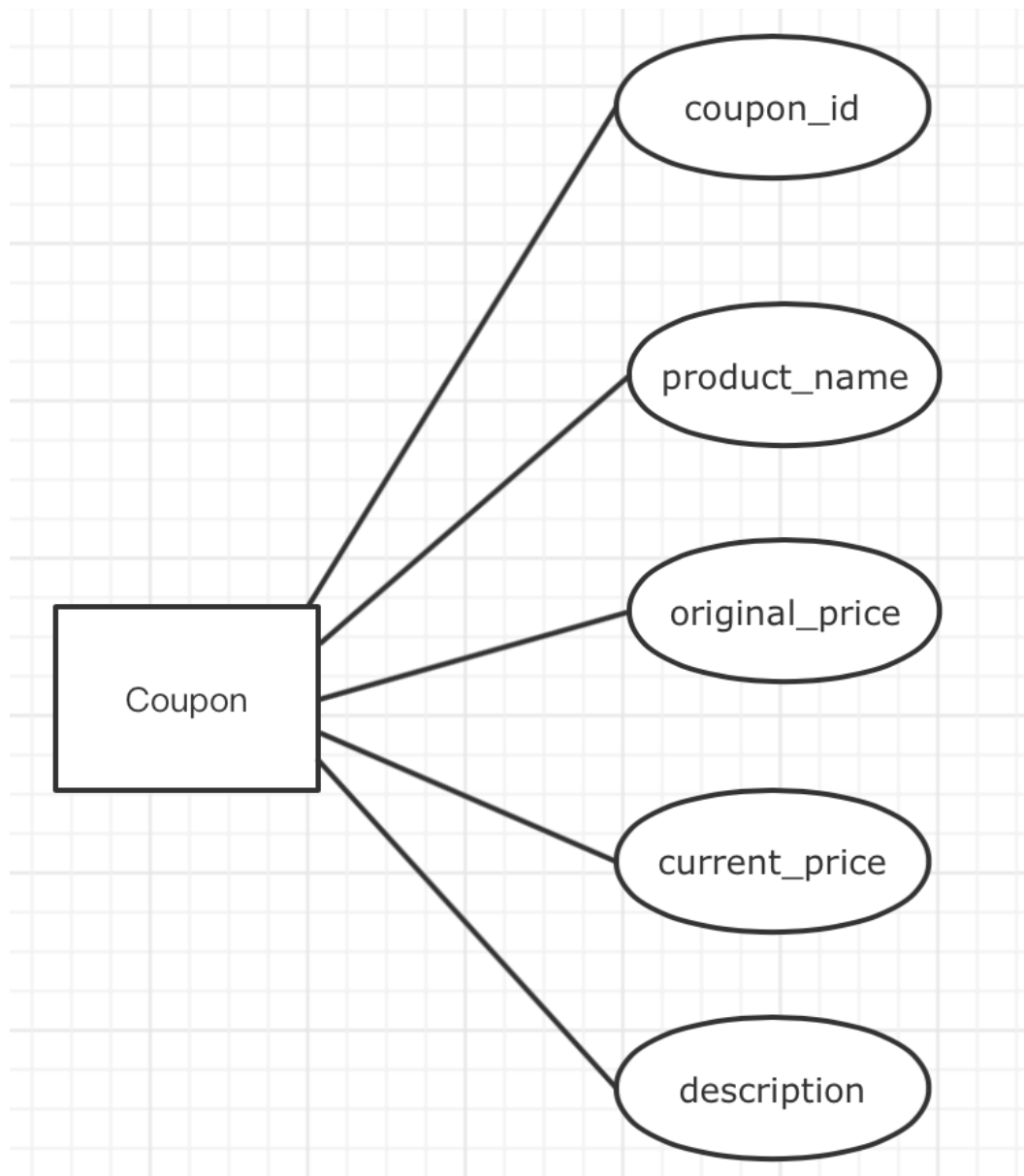
2. Market



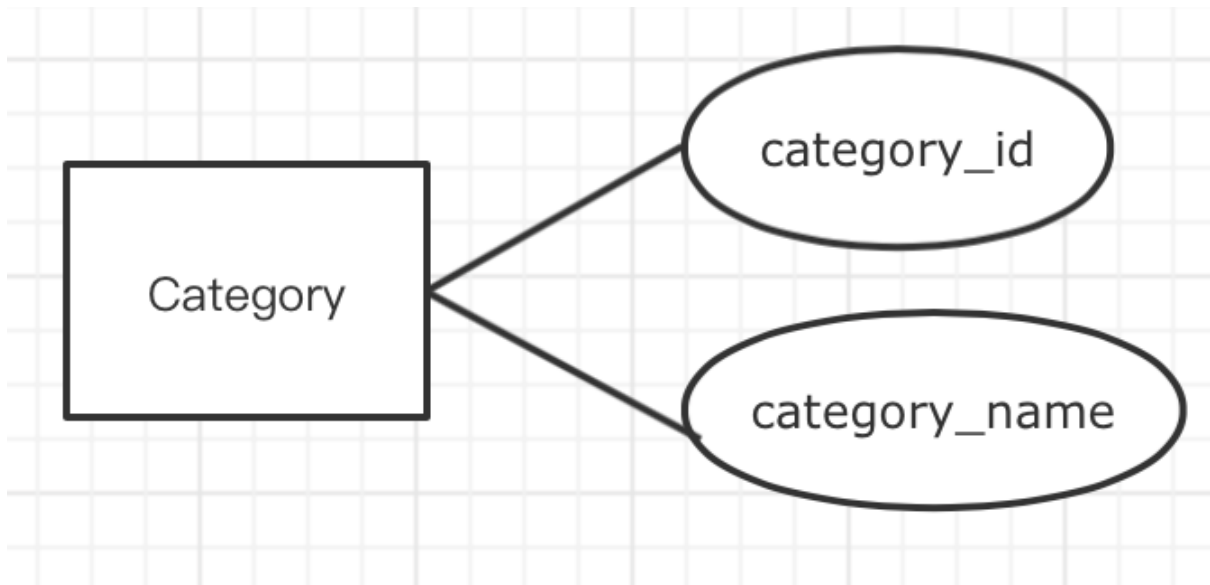
3. User



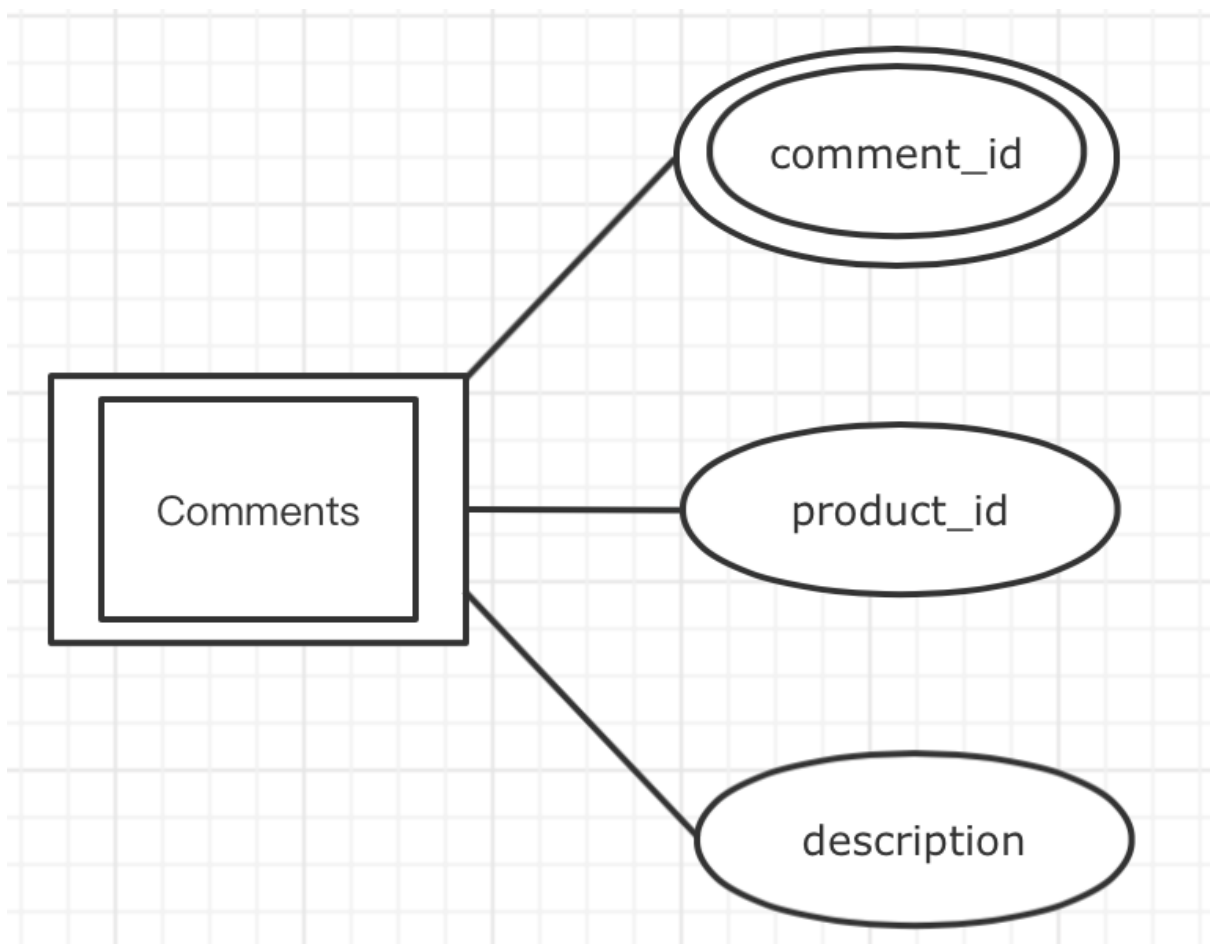
4. Coupon



5. Category



6. Comments



6. Mockups

1. User registration interface

Money Saver

New User Registration

E-mail:

E-mail verification code:

User name:

Password:

Password Confirmation:

[Already have an account? Please Sign in→](#)

☐ I have read the Money Saver platform service agreement

Click to register

2. User login interface

Money Saver

Please login

User name:

Password:

[Not have account? Please Register](#)

Login

3. Users can set their personal information.

Tip: 5 of your favorites have been reduced in price, please check in time!

My Money Saver

Account Settings

Personal information

Password change

E-mail change

Favorites

User name :

SysAdmin

Place of residence:

Sydney, Australia

Gender:

☒ Male ☐ Female

Facebook:

Twitter:

Phone number:

Save

4. Users can set up their favorite products. Relevant discounts can be displayed on the interface.

Tip: 5 of your favorites have been reduced in price, please check in time!

My Money Saver

Account Settings

Personal information

Password change

E-mail change

Favorites

Product A	20\$ coupon	New coupon	Delete
Product B	Half price	Expire soon	Delete
Product C	33% discount	Expire soon	Delete
Product D	50\$ coupon	New coupon	Delete
Product E	30\$ coupon	Reduction	Delete
Product F	10% discount	Reduction	Delete

+

Save

5.Homepage of website

Tip: 5 of your favorites have been reduced in price, please check in time!

Money Saver

Amazon eBay Walmart +

Just enter what you want to find


Search

Hot keywords: Half price/Clearance/Promotion/Sales/Coupons


Latest Offer

Best-selling Brand Coupons Free Shipping Gift-with-purchase Double Discount Value Set

Household Products	Product A Product B Product C Product D
Digital Product	Product A Product B Product C Product D
Makeups	Product A Product B Product C Product D
Foodstuff	Product A Product B Product C Product D



Ad pictures

 Hot items in the system and the number of items with reduced prices in the past 24 hours.

6.Product display interface

Tip: 5 of your favorites have been reduced in price, please check in time!

Money Saver

Amazon eBay Walmart +

Just enter what you want to find.


Search

Hot keywords: Half price/Clearance/Promotion/Sales/Coupons

Latest Offer

Best-selling Brand Coupons Free Shipping Gift-with-purchase Double Discount Value Set

Amazon/Makeups/LANCOME



ABSOLUE SOFT CREAM REFILL 60ml

REFILL INSERT - ALL SKIN TYPES - REGENERATING, BRIGHTENING

39.9\$

40\$ coupon

was 79.9\$

End Time: 01/10/2021

Get me there

Make a comparison

1 comments

Post new comment

Submit

SanZhang This product is really easy to use. I have allergic skin. I have no side effects at all. After using it, my skin has become smoother, which is really great!

04-09-2021

7. Product comparison interface

Tip: 5 of your favorites have been reduced in price, please check in time!

Money Saver

Amazon eBay Walmart +

Just enter what you want to find.


Search

Hot keywords: Half price/Clearance/Promotion/Sales/Coupons

Latest Offer
Best-selling
Brand Coupons
Free Shipping
Gift-with-purchase
Double Discount
Value Set

Comparison: Product A with Product B


ABSOLUE SOFT CREAM REFILL 60ml
REFILL INSERT - ALL SKIN TYPES - REGENERATING, BRIGHTENING



Best price	39.9
Likes	5
Origin	France
Capacity	60ml

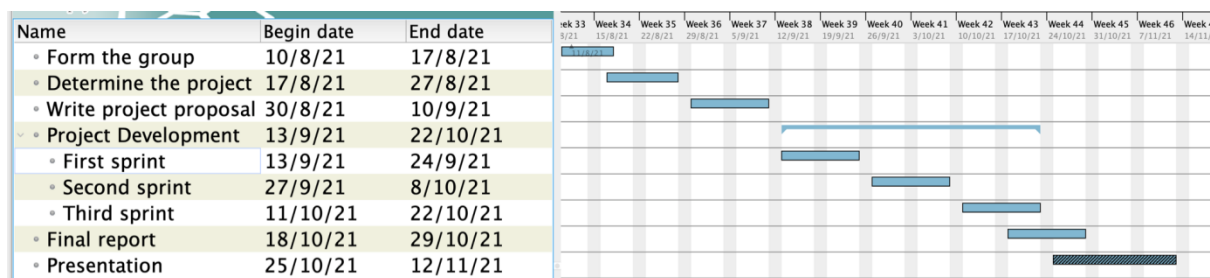
VS

ABSOLUE ROSE 80 LOTION FACE TONER 100ml
FACE TONER - BRIGHTENING, REVITALISING - GRAND ROSE EXTRACTS



Best price	65.9
Likes	9
Origin	France
Capacity	100ml

7. Project plan (Gantt Chart)



8. Intended Individual Contribution

- Mahuirong Du is responsible for the back-end development, including database design, back-end programming. And will also participate in UI design actively to cope with front-end team members.

- Nan Xiao is responsible for the back-end and front-end development, including database design, back-end coding (implements the functions of back-end) and parts of front-end coding.
- Heyang Li is responsible for the back-end development, including database design/setup, back-end programming, etc. Besides, he will also assist the front-end team to design and develop the user interface.
- Yidan Wang is responsible for the front-end development and UI design including HTML, Javascript programming and UI design. In terms of functional implement, she will provide suggestions on interface interaction.
- Wei Cheng is responsible for the front-end development including HTML, CSS programming and UI design. And he will cooperate with the back-end team to make adjustments to achieve the usability of the overall function.

9. Conclusion References

- [1] Lee, JE 2013, The Effect of Tensile Price Claim and Price Discount Disconfirmation on Online Customers' Perceptions and Purchase Intentions, ProQuest Dissertations Publishing.
- [2] McIntyre, C, Melewar, TC, & Dennis, C 2016, Multi-Channel Marketing, Branding and Retail Design: New Challenges and Opportunities, Emerald Publishing Limited, Bingley.
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[4] Kardes, F. R., Herr, P. M., & Schwarz, N. (2019). Handbook of research methods in consumer psychology . Routledge.

[5] Rundle, P. G., Bahadori, A., & Doust, K. (2019). Effective Front-End Strategies to Reduce Waste on Construction Projects (1st ed. 2019.). Springer International Publishing.