CS5200 Database Management Systems

Project Proposal

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- **Top-level Project Description:**

    This is a project about a platform where users can get detailed information about skincare products and leave reviews about them. Users can create, retrieve, update, and delete their reviews. They can search skincare products by selecting categories and product types or using keywords in a search bar. In addition to regular users, there are also special users who are cosmetic experts such as dermatologists who can provide reviews about the products. Furthermore, the platform shows which stores sell each product. On this platform, cosmetic companies can also view the users' reviews, so they can get feedback on their products.
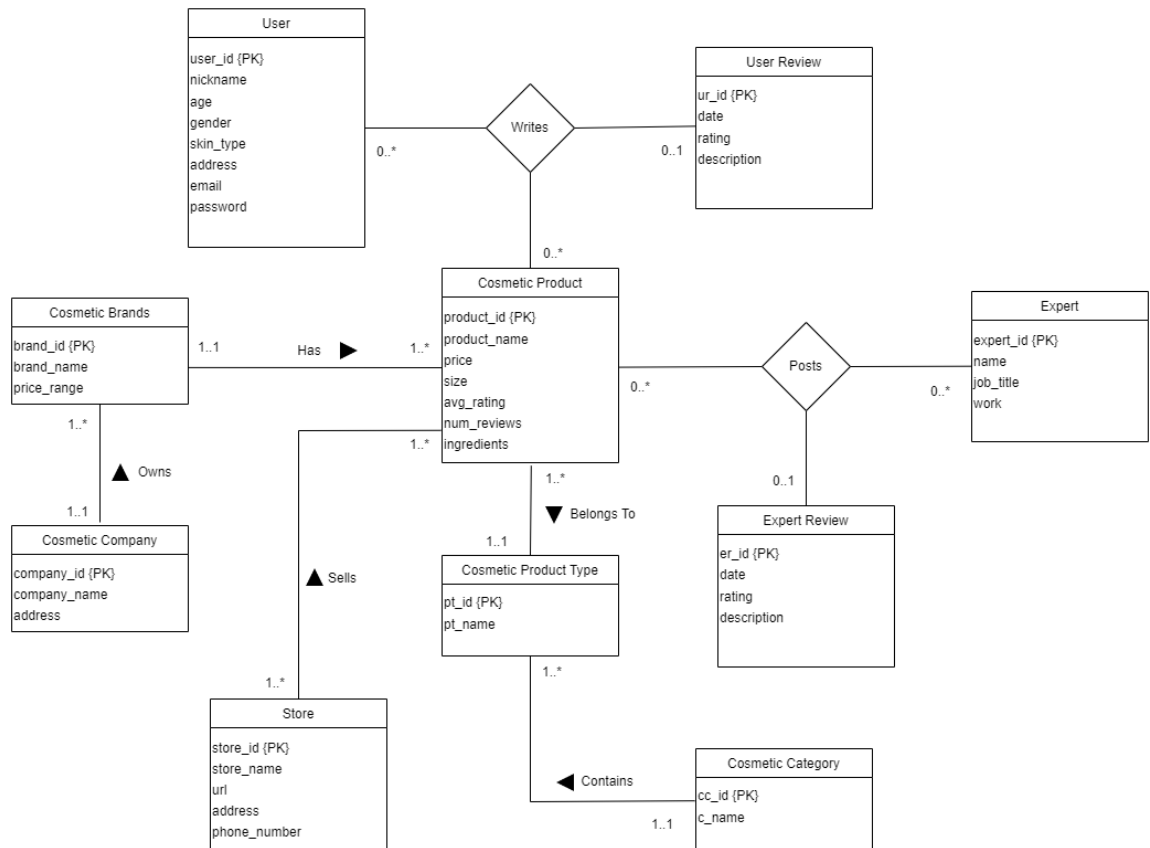
- **Software:**

    For this project, we will use SQL to create queries for our database and MySQL Workbench as a tool for SQL. To develop our app which shares reviews about cosmetics, we choose Python to develop and use the libraries of Python to connect MySQL database. Users will be allowed to handle their data through the application developed in Python and not be able to directly deal with the data. We do not have any constraint for specific machines for this project.

- **Domain Interest:**

    A skincare product is an essential product to keep healthy skin. There is an overwhelming variety of cosmetic products available from many markets all around the world. We had difficulty while we were choosing what skincare products to buy. It is difficult for any individual to be able to sort through all of the options to choose good products that match their skin type. This project can be useful for many people struggling with this problem. This platform can create a community where users can share their experience and choose products that have good reviews on users who have similar skin type.

- UML Diagram

User
user_id {PK}
nickname
age
gender
skin_type
address
email
password

User Review
ur_id {PK}
date
rating
description

Writes   0..*   0..1

0..*

Cosmetic Product
product_id {PK}
product_name
price
size
avg_rating
num_reviews
ingredients

Cosmetic Brands
brand_id {PK}
brand_name
price_range

1..1   Has   1..*

1..*   Owns   1..1

Cosmetic Company
company_id {PK}
company_name
address

Expert
expert_id {PK}
name
job_title
work

Posts   0..*   0..*

0..1

Expert Review
er_id {PK}
date
rating
description

1..*   Belongs To   1..1

Cosmetic Product Type
pt_id {PK}
pt_name

1..*   Sells

1..*

Store
store_id {PK}
store_name
url
address
phone_number

1..*

Contains   1..1

Cosmetic Category
cc_id {PK}
c_name

- Activity Diagram