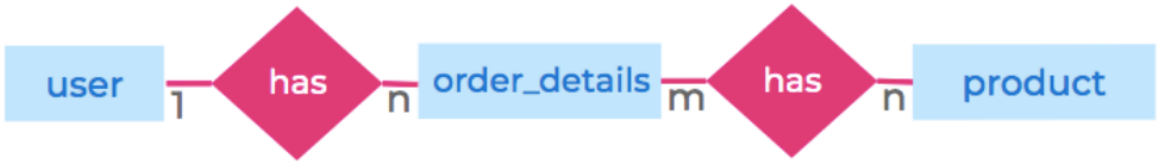
Views and Subqueries Coding Practice

Let's try out the questions in this practice set to gain further grip on Views and Subqueries. Here you go!

Database:

The database stores the sample data of an e-commerce aplication.

Here, the database consists of `user` , `order_details` and `product` tables that store the information of users, orders placed, and the products on the platform.



Refer the tables in the code playground for a better understanding of the database.

1. Create a view `user_details` to store the following information of the `user`

Columns In View

id	name	age	gender	pincode
...	...	...	...	...

```
CREATE VIEW user_details AS
SELECT id,name,age,gender,pincode
FROM user;
```

2. Create a view `user_order_details` to store the following information of the users and their orders.

Columns In View

user_id	name	age	gender	pincode	order_id	total_amount
...	...	...	...	...	..	...

```
CREATE VIEW user_order_details AS
SELECT
  user.id AS user_id, user.name, user.age, user.gender, user.pincode, order_details.order_id, order_details.total_amount
FROM user
  INNER JOIN order_details ON order_details.customer_id = user.id;
```

3. Get the user_id and pincode of the customers who shopped for more than 50,000 rupees from the `location_order_details` view present in the database.

Data in location_order_details View

user_id	pincode	order_id	total_amount
...	...	...	...

Expected Output Format:

user_id	pincode	total_amount_spent
...	...	...

```
SELECT user_id, pincode, SUM(total_amount) AS total_amount_spent
FROM location_order_details GROUP BY user_id HAVING total_amount_spent > 50000;
```

4. Get the rating variance for every product in the database.

Note:

Rating variance is the difference between average rating and rating of a product

Expected Output Format:

name	rating_variance
...	...

```
SELECT
  name,
  (
    SELECT
      avg(rating)
    FROM
      product
  ) - rating AS rating_variance
FROM product
```

5. Let's now calculate the rating variance of products in the "MOBILE" category.

Note:

Rating variance is the difference between average rating and rating of a product

Expected Output Format:

name	rating_variance
...	...

```
SELECT
  name, ( SELECT avg(rating) FROM product WHERE category = 'MOBILE') - rating AS rating_variance
FROM product WHERE category = 'MOBILE'
```

6. Get all the products from the watch category, where rating is greater than average rating

Expected Output Format:

name	rating
...	...

```
SELECT name, rating FROM product
WHERE
  rating >(SELECT avg(rating) FROM product WHERE category = 'WATCH') AND category = 'WATCH'
```

7. Get the users where average amount spent by the user is greater than the average amount spent on all the orders on the platform

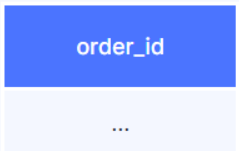
Expected Output Format:

customer_id	avg_amount_spent
...	...

```
SELECT customer_id, avg(total_amount) AS avg_amount_spent
FROM  order_details
GROUP BY customer_id
HAVING avg_amount_spent > (SELECT avg(total_amount) FROM order_details)
```

8. Get order ids in which order consists of mobile (product_ids: 291, 292, 293, 294, 296) but not screen guard (product_ids: 301, 302, 303, 304).

Expected Output Format:




```
SELECT order_id FROM order_details

WHERE order_id IN (SELECT order_id FROM order_product WHERE product_id IN (291, 292, 293, 294, 296) )

 AND NOT

order_id IN( SELECT order_id     FROM order_product WHERE product_id IN (301, 302, 303, 304))
```