Coding Practice Views and Sub Queries

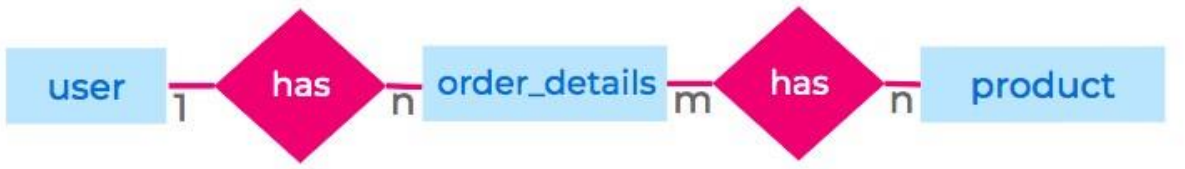
Let's try out the questions in this practice set to gain further grip on Views and Subqueries. Here you go!

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.

QUESTIONS

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

Columns In View

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

SHOW ANSWER

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
...	...	...	...	...	..

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:

order_id

...

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));

1. Order_product Table

order_id	product_id	no_of_units
611	236	1
611	248	2
611	252	1
680	246	5

order_id	product_id	no_of_units
680	251	1
680	206	2
754	209	1

2. Order_details Table

order_id	customer_id	order_date	shipped_date	shipped_id	total_amount
500	15	2021-01-09 01:14	2021-01-13 01:14	3052	2858
501	8	2021-01-26 07:09	2021-01-28 07:09	3086	5441
502	10	2021-01-02 11:58	2021-01-05 11:58	3076	3670
503	8	2021-01-31 05:30	2021-02-04 05:30	3199	4158
504	7	2021-01-09 16:18	2021-01-15 16:18	3286	5136
505	12	2021-01-31 23:52	2021-02-04 23:52	3189	3290
506	5	2021-01-03 13:45	2021-01-09 13:45	3255	1795

3. Product Table

product_id	name	price_per_unit	rating	category	brand
201	Biotique Basil Soap	81	3.2	SOAP	BIPTIQUE
202	Biotique Almond Soap	34	4.5	SOAP	BIPTIQUE
203	Boat Stone Speaker	1999	4.3	SPEAKER	BOAT
204	Dove Cream	40	3.2	SOAP	DOVE
205	Analog-Digital	3115	4.4	WATCH	FASTRACK
206	Fastfit Watch	805	4	WATCH	FASTRACK

4. User Table

id	name	age	gender	phone_no	address	pincode
1	Sai	40	Male	9860XXXXXX	28 , Super Gas Indl. Estate, Maharastra	400068
2	Boult	20	Male	7328XXXXXX	5454 Interstate, US	30154
3	Sri	20	Female	9275XXXXXX	102 Mahatma Gandhi Road, Kolkata	700009
4	Emma	13	Female	8326XXXXXX	2328 Rhode Island Avenue, DC	20151
5	Kathya	12	Female	7258XXXXXX	891 , Sathy Road, Gandhipuram, Tamil Nadu	641012
6	vihu	50	Male	7756XXXXXX	Near Holy Family Church, Mumbai	400093
7	Olivia	23	Female	8364XXXXXX	3521 Spring Street, Bismarck	61814
8	Isabella	15	Female	8864XXXXXX	2559 Romano Street, PA	18417
9	Jack	40	Male	7294XXXXXX	2156 Peaceful Lane, US	44115
10	Jacob	27	Male	7549XXXXXX	88 Nash Street, Chicago	60605
11	Thomas	13	Male	8644XXXXXX	2062 Oak Lane, US	65270
12	George	12	Female	7612XXXXXX	49 st Floor, Ram Mandir, Mumbai	400002
13	Oscar	50	Male	8526XXXXXX	2808 Franklin Avenue, Texas	78476
14	William	23	Female	9654XXXXXX	4249 American Drive, New Jersey	8104
15	Luis Fonsi	32	Male	7458XXXXXX	4582 Callison Lane, US	19801
16	Park Jae-sang	28	Male	8413XXXXXX	4234 Woodrow Way, Texas	75939
17	Gaurav	38	Male	9458XXXXXX	50 , Greams Rd, Tamil Nadu	600006
18	Vijay Kiragandur	47	Male	9954XXXXXX	50 , Fort Morice Bldg, Mumbai	401303
19	Dil Raju	50	Male	7845XXXXXX	Marol Maroshi Road, Delhi	400059
20	Robert A. Iger	48	Male	9464XXXXXX	509 Corpening Drive, Michigan	48185