VERSION: 2

DBMS

ASSIGNMENT: 2

202412012

JAYESH S CHAUHAN

1. Find the name, price and stock of the most expensive product.

```
Query:
```

```
SELECT
NAME,
PRICE,
STOCK_QUANTITY
FROM
"EC_DB".PRODUCTS
WHERE
PRICE = (
SELECT
MAX(PRICE)
FROM
"EC_DB".PRODUCTS
```

Output:



2. Get the total number of orders placed by each user.

Query:

SELECT

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```
DBMS ASSIGNMENT: 2
USER ID,
```

00211_10)

COUNT(ORDER_ID) AS TOTAL_ORDERS

FROM

"EC DB".ORDERS

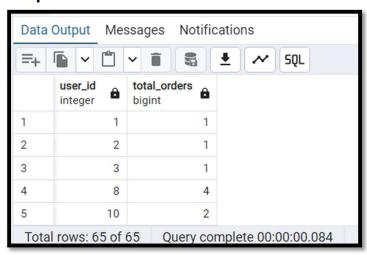
GROUP BY

USER ID

ORDER BY

USER ID;

Output:



3. Find the product with the highest number of reviews.

Query:

SELECT

COUNT(REVIEW_ID) AS TOTAL_REVIEWS,

PRODUCTS.NAME

FROM

"EC DB".REVIEWS

JOIN "EC_DB".PRODUCTS ON REVIEWS.PRODUCT_ID =

PRODUCTS.PRODUCT ID

GROUP BY

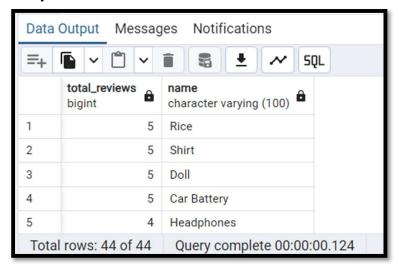
PRODUCTS.NAME

ORDER BY

TOTAL REVIEWS DESC;

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Output:



4. Get the average rating of each product.

Query:

SELECT

PRODUCT ID,

AVG(RATING) AS AVG RATING

FROM

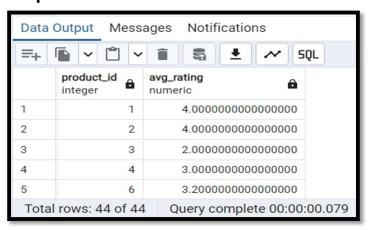
"EC DB".REVIEWS

GROUP BY

PRODUCT ID

ORDER BY

PRODUCT ID;



5. Get the total revenue generated by each category.

Query:

SELECT

CAT.CATEGORY ID,

CAT.CATEGORY NAME,

SUM(ORD.TOTAL AMOUNT) REVENUE

FROM

"EC DB".ORDERS ORD

JOIN "EC DB".ORDER DETAILS ORD DET ON ORD.ORDER ID =

ORD DET.ORDER ID

JOIN "EC_DB".PRODUCTS PRO ON ORD_DET.PRODUCT_ID =

PRO.PRODUCT ID

JOIN "EC DB".CATEGORIES CAT ON PRO.CATEGORY ID = CAT.CATEGORY ID

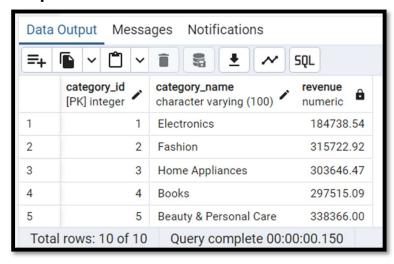
GROUP BY

CAT.CATEGORY ID

ORDER BY

CAT.CATEGORY ID;

Output:



6. Find the most popular product (most ordered).

Query:

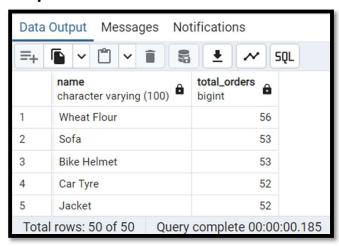
SELECT

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```
PRO.NAME,
SUM(ORD_DET.QUANTITY) AS TOTAL_ORDERS
FROM
"EC_DB".PRODUCTS PRO
JOIN "EC_DB".ORDER_DETAILS ORD_DET ON ORD_DET.PRODUCT_ID =
PRO.PRODUCT_ID
GROUP BY
PRO.NAME
ORDER BY
```

Output:

TOTAL ORDERS DESC;



7. List users who have spent more than \$1000 in total.

Query:

```
SELECT

U.USER_ID,

U.USERNAME,

SUM(O.TOTAL_AMOUNT) SPENTED_AMOUNT

FROM

"EC_DB".USERS U

JOIN "EC_DB".ORDERS O ON U.USER_ID = O.USER_ID

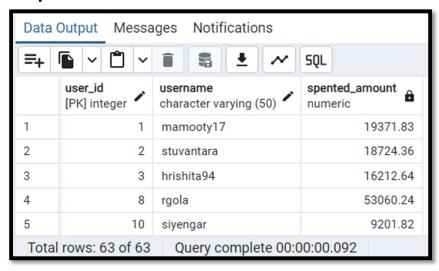
WHERE

O.TOTAL_AMOUNT > 1000
```

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```
GROUP BY
U.USER_ID
ORDER BY
U.USER ID;
```

Output:



8. Get the details of the largest order (by total amount).

```
Query:
```

```
SELECT

*

FROM

"EC_DB".ORDER_DETAILS ORD_DET

JOIN "EC_DB".ORDERS ORD ON ORD_DET.ORDER_ID = ORD.ORDER_ID

WHERE

ORD.TOTAL_AMOUNT = (

SELECT

MAX(TOTAL_AMOUNT)

FROM

"EC_DB".ORDERS
);

Output:
```

Data	Data Output Messages Notifications □ V □ V □ SQL							
	order_detail_id integer	order_id integer	product_id integer	quantity integer	price numeric (10,2)	order_id integer	user_id integer	order_date timestamp without time zone
1	95	4	35	2	1162.28	4	74	2024-03-24 00:00:00
2	147	4	35	2	5721.03	4	74	2024-03-24 00:00:00
3	241	4	40	1	2917.16	4	74	2024-03-24 00:00:00
Tota	al rows: 3 of 3 Q	uery comple	te 00:00:00.07	6				

9. List all products that have never been ordered.

Query:

Output:

10. Find the most active user (by the number of reviews).

Query:

SELECT

COUNT(REV.REVIEW_ID) AS REVIEW_COUNT,

US.USERNAME

FROM

"EC DB".REVIEWS REV

JOIN "EC_DB".USERS US ON REV.USER_ID = US.USER_ID

GROUP BY

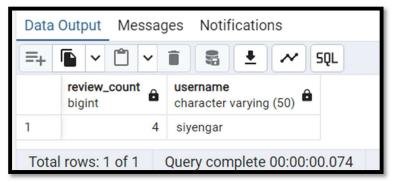
US.USERNAME

ORDER BY

REVIEW COUNT DESC

LIMIT

1



11. Get the average order amount per user.

Query:

SELECT

US.USERNAME,

AVG(ORD.TOTAL AMOUNT) AVG ORDERED AMOUNT

FROM

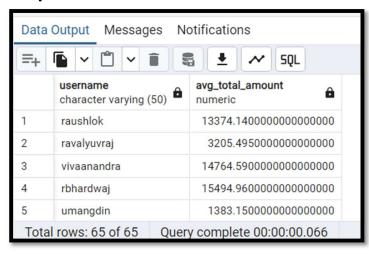
"EC DB".ORDERS ORD

JOIN "EC DB". USERS US ON ORD. USER ID = US. USER ID

GROUP BY

US.USERNAME;

Output:



12. List all users who have not placed any orders.

Query:

SELECT

US.USER_ID,
US.USERNAME

FROM

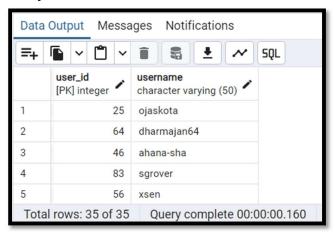
"EC DB".ORDERS ORD

RIGHT OUTER JOIN "EC_DB".USERS US ON US.USER_ID = ORD.USER_ID

WHERE

ORD.ORDER_ID IS NULL;

Output:



13. Find the most recent review for each product.

Query:

SELECT

PD.PRODUCT ID,

MIN(REV.REVIEW DATE) AS RECENT REVIEW DATE

FROM

"EC DB".REVIEWS REV

JOIN "EC DB".PRODUCTS PD ON REV.PRODUCT ID = PD.PRODUCT ID

GROUP BY

PD.PRODUCT ID

ORDER BY

PD.PRODUCT ID;

Data	Data Output Messages Notifications					
=+	-	<u> </u>	■ 🔹 🖊 SQL			
	product_ [PK] inte		recent_review_date timestamp without time zone			
1		1	2024-07-07 00:00:00			
2		2	2024-01-28 00:00:00			
3		3	2024-03-16 00:00:00			
4		4	2024-05-06 00:00:00			
5		6	2024-02-26 00:00:00			
Tota	Total rows: 44 of 44 Query complete 00:00:00.071					

14. Get the list of users who have reviewed all products they have purchased.

```
Query:
```

```
SELECT
 REV.REVIEW_ID,
 REV.USER_ID,
 REV.PRODUCT_ID,
 ORD.ORDER_ID,
 ORD.USER_ID
FROM
 "EC DB".REVIEWS REV
 RIGHT OUTER JOIN "EC_DB".ORDERS ORD ON REV.USER_ID = ORD.USER_ID
WHERE
 REVIEW_ID IS NOT NULL
```

Data	Data Output Messages Notifications							
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	revie integ	w_id jer	â	user_ integ	- 10	product_id integer	order_id integer	user_id integer
1			1		99	43	21	99
2			2		73	19	86	73
3			2		73	19	58	73
4			5		78	7	36	78
5			7		79	26	28	79
Tota	Total rows: 82 of 82 Query complete 00:00:00.061							

15. Create a view that shows the total amount spent by each user.

Query:

USER ID

CREATE VIEW TOTAL_AMOUNT_SPENT_BY_EACH_USER AS SELECT

USER_ID,

SUM(TOTAL_AMOUNT) AS AMOUNT_SPENT

FROM

"EC_DB".ORDERS

GROUP BY

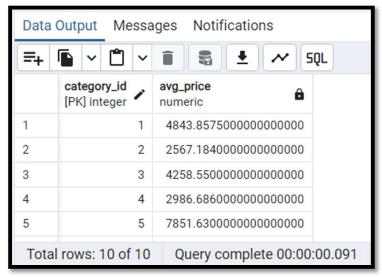
SELECT * FROM TOTAL_AMOUNT_SPENT_BY_EACH_USER; Output:



Data	Output Me	ssages Notifications
=+	~ <u></u>	∨ 🖹 🖁 🛂 💉 SQL
	user_id integer	amount_spent numeric
1	87	17062.15
2	74	26604.03
3	54	13965.43
4	29	5410.19
5	71	24920.14
Tota	l rows: 65 of	65 Query complete 00:00:00.070

16. Get the average price of products in each category that have been reviewed.

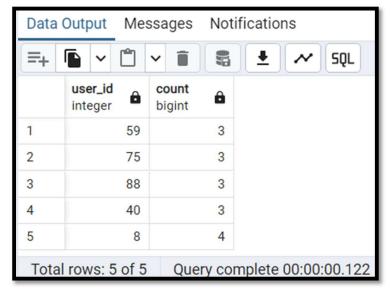
```
Query:
SELECT
 CAT.CATEGORY ID,
 AVG(PRO.PRICE) AS AVG PRICE
FROM
 "EC DB".PRODUCTS PRO
 JOIN "EC_DB".CATEGORIES CAT ON CAT.CATEGORY_ID = PRO.CATEGORY_ID
WHERE
 PRO.PRODUCT_ID IN (
      SELECT DISTINCT
           REVIEWS.PRODUCT ID
      FROM
           "EC DB".REVIEWS
 )
GROUP BY
 CAT.CATEGORY_ID
ORDER BY
 CAT.CATEGORY_ID
```



17. List all users who have placed more than 2 orders.

Query:

```
SELECT
ORD.USER_ID,
COUNT(ORD.ORDER_ID)
FROM
"EC_DB".ORDERS ORD
GROUP BY
ORD.USER_ID
HAVING
COUNT(ORD.ORDER_ID) > 2;
Output:
```



18. Find users who have made purchases from all categories.

Query:

```
SELECT
 US.USER ID,
 US.USERNAME
FROM
 "EC DB".USERS US
 JOIN "EC DB".ORDERS ORD ON US.USER ID = ORD.USER ID
 JOIN "EC DB".ORDER DETAILS ORD DET ON ORD DET.ORDER ID =
ORD.ORDER ID
 JOIN "EC DB".PRODUCTS PD ON ORD DET.PRODUCT ID = PD.PRODUCT ID
 LEFT JOIN "EC DB".CATEGORIES CAT ON PD.CATEGORY ID =
CAT.CATEGORY ID
WHERE
 CAT.CATEGORY ID IS NOT NULL
GROUP BY
 US.USER ID,
 US.USERNAME
ORDER BY
 US.USER ID;
```



19. List all users who have placed orders in the last 30 days but haven't made a purchase in the last 7 days.

Query:

SELECT

*

FROM

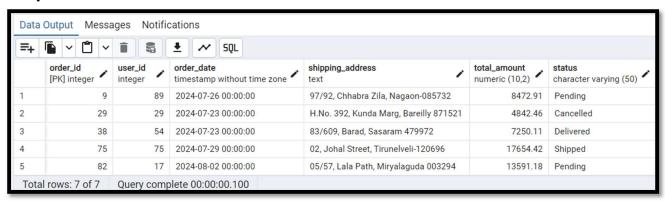
"EC_DB".ORDERS

WHERE

ORDER_DATE > CURRENT_DATE -30

AND ORDER DATE < CURRENT DATE -7

Output:



20. Identify the products with a stock quantity below the average stock level. Query:

SELECT

*

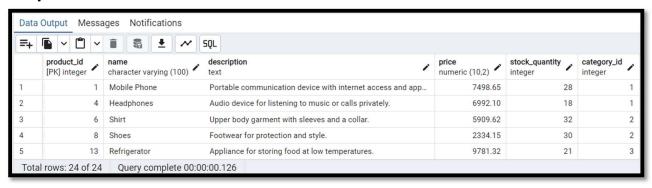
FROM

```
ASSIGNMENT: 2
```

```
"EC DB".PRODUCTS
WHERE
 STOCK QUANTITY <= (
      SELECT
          AVG(STOCK QUANTITY)
      FROM
           "EC_DB".PRODUCTS
```

Output:

DBMS



21. Create a view 'product avg rating' to show the average rating of each product

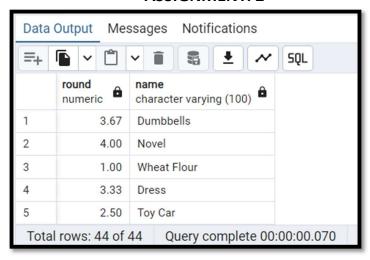
```
Query:
```

```
CREATE VIEW PRODUCT AVG RATING AS
SELECT
  ROUND(AVG(REV.RATING), 2),
  PD.NAME
FROM
  "EC DB".REVIEWS REV
 JOIN "EC DB".PRODUCTS PD ON REV.PRODUCT ID = PD.PRODUCT ID
GROUP BY
  PD.NAME
SELECT * FROM PRODUCT AVG RATING;
```

DBMS



ASSIGNMENT: 2



22.List products with an average rating above 4.5 using the 'product_avg_rating' view.

Query:

SELECT

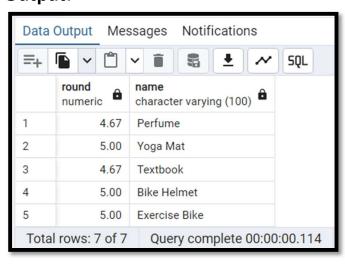
*

FROM

PRODUCT AVG RATING

WHERE

ROUND > 4.5



23. Create a view 'product_review_count' to show the number of reviews per product.

Query:

```
CREATE VIEW PRODUCT_REVIEW_COUNT AS

SELECT

COUNT(REV.REVIEW_ID) AS TOTAL_REVIEWS,

PRODUCT_ID

FROM

"EC_DB".REVIEWS REV

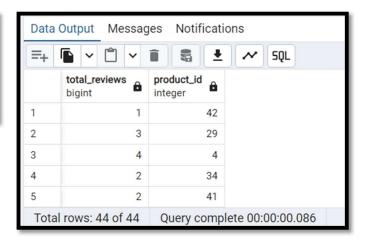
GROUP BY

PRODUCT_ID
```

SELECT * FROM PRODUCT_REVIEW_COUNT;

Output:





24. List products with more than 10 reviews using the 'product_review_count' view.

Query:

SELECT

*

FROM

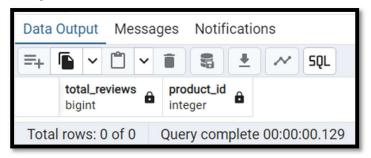
PRODUCT REVIEW COUNT

WHERE

TOTAL REVIEWS > 10;

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Output:



25. Create a view 'recent_orders' to show all orders placed in the last 30 days.

Query:

CREATE VIEW RECENT_ORDERS AS

SELECT

*

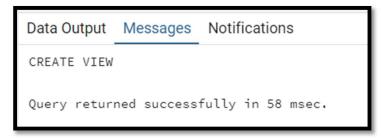
FROM

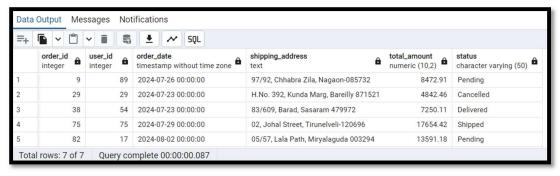
"EC DB".ORDERS

WHERE

ORDER_DATE > CURRENT_DATE -30

SELECT * FROM RECENT_ORDERS;





26. List the most expensive orders placed in the last 30 days using the 'recent_orders' view.

```
Query:
```

```
FROM
RECENT_ORDERS
WHERE
TOTAL_AMOUNT = (
SELECT
MAX(TOTAL_AMOUNT)
FROM
RECENT_ORDERS
```

Output:



27. Create a view 'product_sales_quantity' to show the total quantity sold for each product.

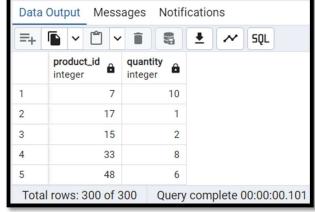
Query:

```
CREATE VIEW PRODUCT_SALES_QUANTITY AS
SELECT
PRODUCT_ID,
QUANTITY
FROM
"EC_DB".ORDER_DETAILS
```

SELECT * FROM PRODUCT_SALES_QUANTITY;

Output:





28. List the top 5 best-selling products using the 'product_sales_quantity' view.

Query:

SELECT

*

FROM

PRODUCT_SALES_QUANTITY

ORDER BY

QUANTITY DESC

LIMIT

5

Data	Output Mess	ages Notifications	
=+	► ∨ 🖺 ∨		♣ ~ SQL
	product_id integer	quantity integer	
1	33	10	
2	11	10	
3	7	10	
4	38	10	
5	28	10	
Tota	l rows: 5 of 5	Query com	plete 00:00:00.072

29. Create a view 'product_sales_quantity' to show the total number of orders each user has placed.

Query:

```
CREATE VIEW PRODUCT_SALES_QUANTITY AS
SELECT
USER_ID,
COUNT(ORDER_ID) AS TOTAL_ORDERS
FROM
"EC_DB".ORDERS
GROUP BY
USER_ID
ORDER BY
TOTAL ORDERS DESC
```

SELECT * FROM PRODUCT_SALES_QUANTITY



Data	Data Output Messages Notifications						
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	product_id integer	quantity integer					
1	7	10					
2	17	1					
3	15	2					
4	33	8					
5	48	6					
Tota	Total rows: 300 of 300 Query complete 00:00:00.083						

30. List users who have placed more than 5 orders using the 'user_order_count' view.

Query:

CREATE VIEW USER ORDER COUNT AS

SELECT

USER ID,

COUNT(ORDER_ID) AS TOTAL_ORDERS

FROM

"EC DB".ORDERS

GROUP BY

USER ID

ORDER BY

TOTAL ORDERS DESC;

SELECT * FROM USER ORDER COUNT WHERE TOTAL ORDERS > 5;



