- **DBMS Assignment-9.**
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Q1. Update product rating column in product table as per the entries in order_product table (calculate average).

update product p set p.rating=(SELECT AVG(product_rating) from order_product GROUP BY product_id HAVING product_id=p.product_id);

```
SQL> update product p set p.rating=(SELECT AVG(product_rating)
  2  from order_product GROUP BY product_id
  3  HAVING product_id=p.product_id);

10 rows updated.

SQL> set linesize 250
SQL> Select * from product;

PRODU PRODUCT                                             AMOUNT QUANTITY_REMAINING CATEG M_ID      RATING
----- -------------------------------------------------- ---------- ------------------ ----- ----- ----------
1P    The Programming language of ORACLE                      350                  4 1C    1S           4.5
2P    Nike White Shoes                                       7000                  2 2C    3S
3P    White Lamp                                              800                  3 3C    3S             4
6P    Catwalk leather flats                                  1599                  3 2C    4S             1
7P    Introduction to Java                                    650                  8 1C    5S             1
8P    Portico Kingsize Bedsheet                              1999                  1 3C    1S             5
9P    Book Rack                                               999                  1 3C    4S             4
10P   Artificial Intelligence, 3rd Edition                    570                  9 1C    2S
11P   Introduction to Python                                  630                 10 1C    5S             4
12P   Jabra Headphone                                        5000                  2 4C    2S

10 rows selected.
```

Q2. Update Quantity Remaining column in Category table as per the entries in product table.

update category c set c.quantity_remaining=(select sum(quantity_remaining) from product GROUP BY category_id HAVING category_id=c.category_id);

CATEG	CATEGORY	QUANTITY_REMAINING
1C	BOOKS	31
2C	FOOTWEAR	5
3C	HOME DECOR	5
4C	ACCESSORIES	14
5C	LIFESTYLE	

Q3. Update the seller ratings as per the new entries in Order_Products table.

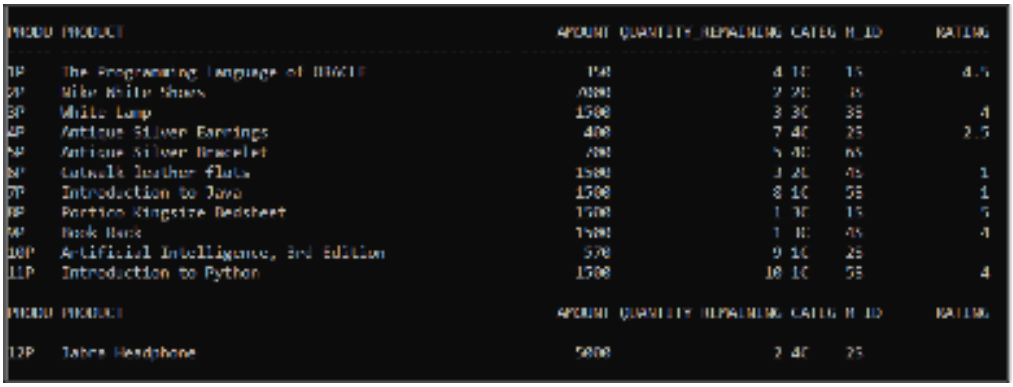
```
update merchant m set m.rating = (select AVG(product_rating) from
order_product GROUP BY m_id
HAVING m_id=m.m_id);
```

M_ID	M_NAME	RATING	ADDRESS
1S	ABHAY	4.66666667	
2S	PRIYA	2	
3S	KISHAN		
4S	VICKY	4	
5S	SNEHA	2.5	
6S	PUSHPA		
7S	XAVI		

7 rows selected.

Q4. Update the amount of least sold product.

```
update product p set p.amount=1500
where p.product_id IN (select product_id from
order_product group by product_id
HAVING COUNT(order_id) = (select MIN(count(order_id)) from
order_product group by product_id));
```



Q5. Display the highest sold product details.

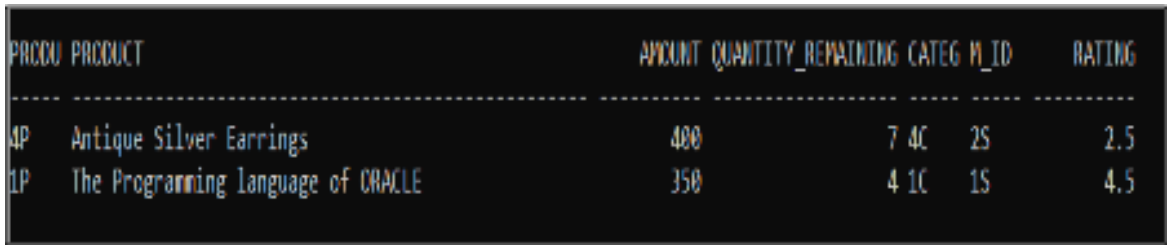
```
select * from product
where product_id IN( select product_id from
(select product_id,count(order_id) from order_product

group by product_id
HAVING count(order_id)=(select MAX(count(order_id)) from
order_product group by product_id)));
```

Q6. Display the product details with the highest rating.

```
select * from order_product
where product_rating IN (select max(product_rating) from
order_product);
```

Q7. Display products in the descending order of product amount sold by the seller who is having the highest rating.

```
select * from product
where product_id IN (select product_id
from order_product
where m_id IN (select m_id from merchant
where rating IN (select max(rating) from merchant))) order by amount
desc;
```



ORDER	PRODU	QUANTITY	M_ID	ORIGINAL_AMT	DISCOUNT	PRODUCT_RATING
20	1P	1	1S	350	0	5
80	8P	1	1S	1999	0	5

PRODU	PRODUCT	AMOUNT	QUANTITY_REMAINING	CATEG	M_ID	RATING
8P	Portico Kingsize Bedsheet	1500	1	3C	1S	5
1P	The Programming language of ORACLE	350	4	1C	1S	4.5

Q8. Display the seller details having ratings >=4 in descending order.

```
select * from merchant where rating>=4
order by rating desc;
```

M_ID	M_NAME	RATING	ADDRESS
1S	ABHAY	4.66666667	
4S	VICKY	4	

Q9. Display ratings in the ascending order of products sold by the seller.

```
select rating, m_name from merchant
where m_id IN (select m_id from
(select m_id, count(order_id) from order_product

group by m_id
order by count(order_id)));
```

```
SQL> select rating, m_name
  2  from merchant
  3  where m_id IN (select m_id from
  4  (select m_id, count(order_id)
  5  from order_product
  6  group by m_id
  7   order by count(order_id)));

    RATING M_NAME
---------- ---------------
         4 VICKY
       2.5 SNEHA
         2 PRIYA
4.66666667 ABHAY
```

Q10. Display the details of Category which is having highest quantity remained.

select * from category
where quantity_remaining IN (select max(quantity_remaining) from category);

Q11. Display the details of the product having amount >=1000.

select * from product where amount >= 1000;

```
CATEG CATEGORY             QUANTITY_REMAINING
----- -------------------- ------------------
1C    BOOKS                                31
```

```
PRODU PRODUCT                                            AMOUNT QUANTITY_REMAINING CATEG M_ID      RATING
----- -------------------------------------------------- ------ ------------------ ----- ----- ----------
2P    Nike White Shoes                                   7000                  2 2C    3S
3P    White Lamp                                         1500                  3 3C    3S             4
6P    Catwalk leather flats                              1500                  3 2C    4S             1
7P    Introduction to Java                               1500                  8 1C    5S             1
8P    Portico Kingsize Bedsheet                          1500                  1 3C    1S             5
9P    Book Rack                                          1500                  1 3C    4S             4
11P   Introduction to Python                             1500                 10 1C    5S             4
12P   Jabra Headphone                                    5000                  2 4C    2S

8 rows selected.
```

Q12. Display the customer details who has not repeated the same

product purchase.

```
select * from customer
where customer_id IN (select customer_id

from(select customer_id, category_id, count(order_id)
from (select o.order_id,o.product_id,p.category_id,oi.customer_id
from product p, orders oi, order_product o
where o.order_id=oi.order_id AND o.product_id=p.product_id) group
by customer_id,category_id
HAVING count(order_id)<=1));
```

```
CUSTO NAME                           PASSWORD
----- ------------------------------ ------------------------
8CU   Alice                          Alice123
2CU   Ben                            Ben123
6CU   Raj                            Raj123
7CU   Aditya                         Aditya123
3CU   Lili                           Lili123
10CU  Mike                           Mike123
4CU   Tom                            Tom123

7 rows selected.
```

Q13. Display the product details which is having category as books in ascending order.

```
select * from product
where category_id IN (select category_id from category where
category='BOOKS')
order by product;
```

Q14. Display the seller details having ratings >= 3.

```
select * from merchant where rating>= 3;
```

Q15. Display the date and time of the orders which is purchase in 50% discount.

```
select o.orderdate from orders o, order_product op where
op.discount<50 AND o.order_id=op.order_id;
```

PRODU	PRODUCT	AMOUNT	QUANTITY_REMAINING	CATEG	M_ID	RATING
10P	Artificial Intelligence, 3rd Edition	570	9	1C	2S	
7P	Introduction to Java	1500	8	1C	5S	1
11P	Introduction to Python	1500	10	1C	5S	4
1P	The Programming language of ORACLE	350	4	1C	1S	4.5

M_ID	M_NAME	RATING	ADDRESS
1S	ABHAY	4.66666667	
4S	VICKY	4	

ORDERDATE
21-JAN-22
20-MAY-22
20-MAY-22
12-FEB-22
11-JAN-22
12-JAN-22
06-JAN-22
07-MAR-22
20-MAR-22
17-MAR-22

Q16. Display the customer id and name who purchase the products having more than quantity.

```
select customer_id, name
from customer
where customer_id IN (select customer_id from
(select o.customer_id from customer c, orders o, product p,
order_product op where o.customer_id=c.customer_id AND
```

p.quantity_remaining>50 AND p.product_id=op.product_id AND o.order_id=op.order_id));

Q17. Display the product rating for highest purchase product in month may 2020.

select rating from product
where product_id IN (select product_id from
(select product_id,count(order_id)
from (select o.order_id,orderdate,product_id from orders o,
order_product where o.order_id=order_product.order_id)
where (extract(month from orderdate))=5
AND (extract(year from orderdate))=2022
HAVING count(order_id)=(select MAX(count(order_id))
from (select o.order_id,orderdate,product_id from orders o,
order_product where o.order_id=order_product.order_id)
where (extract(month from orderdate))=5
AND (extract(year from orderdate))=2022
group by product_id)
group by product_id));

```
SQL> select customer_id, name
  2  from customer
  3  where customer_id IN (select customer_id from
  4  (select o.customer_id from customer c, orders o, product p, order_product op
  5  where o.customer_id=c.customer_id AND p.quantity_remaining>50 AND p.product_id=op.product_id AND o.order_id=op.order_id));

no rows selected
```

```
    RATING
----------
         4
       4.5
```

Q18. Display the product id on the products having 30% discount in between 10 am to 5 pm.

select * from product
where product_id IN (select product_id from order_product where discount=30);

```
SQL> select * from product
  2  where product_id IN (select product_id from
  3  order_product where discount=30);

no rows selected
```