Sardar Vallabhbhai National Institute of Technology, Surat

Subject: DATABASE MANAGEMENT SYSYTEM

- **DBMS Assignment-9.**
- **Name: Krishna Pandey**
- **Roll No.: B110**
- **Admission No.: U20CS110**

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> 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
4P    Antique Silver Earrings                             400                  7 4C    2S           2.5
5P    Antique Silver Bracelet                             700                  5 4C    6S
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

PRODU PRODUCT                                            AMOUNT QUANTITY_REMAINING CATEG M_ID      RATING
----- -------------------------------------------------- ------ ------------------ ----- ----- ----------
12P   Jabra Headphone                                    5000                  2 4C    2S

12 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));
```

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	1500	3	3C	3S	4
4P	Antique Silver Earrings	400	7	4C	2S	2.5
5P	Antique Silver Bracelet	700	5	4C	6S	
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
10P	Artificial Intelligence, 3rd Edition	570	9	1C	2S	
11P	Introduction to Python	1500	10	1C	5S	4

PRODU	PRODUCT	AMOUNT	QUANTITY_REMAINING	CATEG	M_ID	RATING
12P	Jabra Headphone	5000	2	4C	2S	

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)));
```

PRODU	PRODUCT	AMOUNT	QUANTITY_REMAINING	CATEG	M_ID	RATING
4P	Antique Silver Earrings	400	7	4C	2S	2.5
1P	The Programming language of ORACLE	350	4	1C	1S	4.5

Q6. Display the product details with the highest rating.

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

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

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;
```

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);
```

CATEG	CATEGORY	QUANTITY_REMAINING
1C	BOOKS	31

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

```
select * from product
where amount >= 1000;
```

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;
```

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

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

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

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

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;
```

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));
```

```
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
```

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));
```

```
    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
  2  where product_id IN (select product_id from
  3  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
```