**ASSIGNMENT:- 4**

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**PROBLEM STATEMENT:** DESIGN AT LEAST 10 SQL QUERIES FOR SUTABLE DATABASE APPLICATION USING SQL DML STATEMENTS:ALL TYPES OF JOIN,SUB-QUERY AND VIEW.

**A) Exercise on Joins and Correlations :**

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

**1) Find out the products. Which have been sold to 'Ivan Bayross'.**

mysql> SELECT

NAME,

PRODUCT\_MASTER.PRODUCT\_NO,

DESCRIPTION,

SALES\_ORDER.ORDER\_NO

FROM

CLIENT\_MASTER,

PRODUCT\_MASTER,

SALES\_ORDER,

SALES\_ORDER\_DETAILS

WHERE

CLIENT\_MASTER.NAME = 'Ivan Bayross'

AND

CLIENT\_MASTER.CLIENT\_NO = SALES\_ORDER.CLIENT\_NO

AND

SALES\_ORDER.ORDER\_NO = SALES\_ORDER\_DETAILS.ORDER\_NO

AND

SALES\_ORDER\_DETAILS.PRODUCT\_NO = PRODUCT\_MASTER.PRODUCT\_NO;

+--------------+------------+--------------+----------+

| NAME | PRODUCT\_NO | DESCRIPTION | ORDER\_NO |

+--------------+------------+--------------+----------+

| IVAN BAYROSS | P0001 | T-SHIRTS | O19001 |

| IVAN BAYROSS | P07965 | DEIM SHIRTS | O19001 |

| IVAN BAYROSS | P07885 | PULL OVERS | O19001 |

| IVAN BAYROSS | P0345 | SHIRTS | O19003 |

| IVAN BAYROSS | P06734 | COTTON JEANS | O19003 |

+--------------+------------+--------------+----------+

5 rows in set (0.00 sec)

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**2) Find out the products and their quantities that will have to be delivered in the current month. (ANS NOT SURE)**

mysql> SELECT DELY\_DATE, SALES\_ORDER\_DETAILS.PRODUCT\_NO,QTY\_ORDERED,DESCRIPTION FROM SALES\_ORDER,SALES\_ORDER\_DETAILS,PRODUCT\_MASTER WHERE SALES\_ORDER.ORDER\_NO = SALES\_ORDER\_DETAILS.ORDER\_NO AND SALES\_ORDER\_DETAILS.PRODUCT\_NO = PRODUCT\_MASTER.PRODUCT\_NO AND DATE\_FORMAT(SALES\_ORDER.DELY\_DATE,'MM') = DATE\_FORMAT(SYSDATE(),'MM');

+------------+------------+-------------+--------------+

| DELY\_DATE | PRODUCT\_NO | QTY\_ORDERED | DESCRIPTION |

+------------+------------+-------------+--------------+

| 2002-07-20 | P0001 | 4 | T-SHIRTS |

| 2002-07-20 | P07965 | 2 | DEIM SHIRTS |

| 2002-07-20 | P07885 | 2 | PULL OVERS |

| 2002-06-27 | P0001 | 10 | T-SHIRTS |

| 2002-04-07 | P0345 | 2 | SHIRTS |

| 2002-04-07 | P06734 | 1 | COTTON JEANS |

| 2002-07-26 | P0001 | 10 | T-SHIRTS |

| 2002-07-26 | P07975 | 5 | LYCRA TOPS |

| 2002-02-20 | P07868 | 3 | TROUSERS |

| 2002-02-20 | P07885 | 3 | PULL OVERS |

| 2002-02-20 | P0001 | 10 | T-SHIRTS |

| 2002-02-20 | P0345 | 4 | SHIRTS |

| 2002-05-22 | P07965 | 1 | DEIM SHIRTS |

| 2002-05-22 | P07975 | 1 | LYCRA TOPS |

+------------+------------+-------------+--------------+

14 rows in set (0.00 sec)

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**3) List the ProductNo and description of constantly sold (i.e. rapidly moving) products.**

mysql> SELECT PRODUCT\_NO FROM SALES\_ORDER\_DETAILS WHERE PRODUCT\_RATE = (SELECT MAX(PRODUCT\_RATE) FROM SALES\_ORDER\_DETAILS );

+------------+

| PRODUCT\_NO |

+------------+

| P06734 |

+------------+

1 row in set (0.00 sec)

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**4) Find the names of the clients who have purchased 'Trousers'.**

mysql> SELECT DISTINCT SO.CLIENT\_NO, CM.NAME FROM SALES\_ORDER\_DETAILS SOD, SALES\_ORDER SO, PRODUCT\_MASTER PM, CLIENT\_MASTER CM WHERE PM.PRODUCT\_NO = SOD.PRODUCT\_NO AND SO.ORDER\_NO = SOD.ORDER\_NO AND CM.CLIENT\_NO = SO.CLIENT\_NO AND DESCRIPTION = 'TROUSERS';

+-----------+---------------+

| CLIENT\_NO | NAME |

+-----------+---------------+

| C00003 | CHHAYA BANKER |

+-----------+---------------+

1 row in set (0.00 sec) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**5) List the products and orders from customers who have orderd less than 5 units of 'Pull Overs'.**

mysql> select PRODUCT\_MASTER.PRODUCT\_NO,ORDER\_NO from PRODUCT\_MASTER,SALES\_ORDER\_DETAILS where DESCRIPTION = 'PULL OVERS' and PRODUCT\_MASTER.PRODUCT\_NO = SALES\_ORDER\_DETAILS.PRODUCT\_NO and QTY\_ORDERED < 5;

+------------+----------+

| PRODUCT\_NO | ORDER\_NO |

+------------+----------+

| P07885 | O19001 |

| P07885 | O46865 |

+------------+----------+

2 rows in set (0.00 sec)

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**6) Find the products and their quantities for the orders placed by ‘Ivan Bayross’ and ‘Mamta Muzumdar’.**

mysql> SELECT SOD.PRODUCT\_NO, PM.DESCRIPTION, SUM(QTY\_ORDERED) UNITS\_ORDERED FROM SALES\_ORDER\_DETAILS SOD, SALES\_ORDER SO, PRODUCT\_MASTER PM, CLIENT\_MASTER CM WHERE SO.ORDER\_NO = SOD.ORDER\_NO AND PM.PRODUCT\_NO = SOD.PRODUCT\_NO AND CM.CLIENT\_NO = SO.CLIENT\_NO AND (CM.NAME = 'IVAN BAYROSS' OR CM.NAME = 'MAMTA MUZUMDAR') GROUP BY SOD.PRODUCT\_NO, PM.DESCRIPTION;

+------------+--------------+---------------+

| PRODUCT\_NO | DESCRIPTION | UNITS\_ORDERED |

+------------+--------------+---------------+

| P0001 | T-SHIRTS | 14 |

| P0345 | SHIRTS | 2 |

| P06734 | COTTON JEANS | 1 |

| P07885 | PULL OVERS | 2 |

| P07965 | DEIM SHIRTS | 2 |

+------------+--------------+---------------+

5 rows in set (0.00 sec)

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**7) Find the products and their quantities for the orders placed by Client\_No ‘C00001’ and ‘C00002’.**

mysql> SELECT SO.CLIENT\_NO, SOD.PRODUCT\_NO, PM.DESCRIPTION, SUM(QTY\_ORDERED) UNITS\_ORDERED FROM SALES\_ORDER SO, SALES\_ORDER\_DETAILS SOD, PRODUCT\_MASTER PM, CLIENT\_MASTER CM WHERE SO.ORDER\_NO = SOD.ORDER\_NO AND SOD.PRODUCT\_NO = PM.PRODUCT\_NO AND SO.CLIENT\_NO = CM.CLIENT\_NO GROUP BY SO.CLIENT\_NO, SOD.PRODUCT\_NO, PM.DESCRIPTION HAVING SO.CLIENT\_NO = 'C00001' OR SO.CLIENT\_NO = 'C00002';

+-----------+------------+--------------+---------------+

| CLIENT\_NO | PRODUCT\_NO | DESCRIPTION | UNITS\_ORDERED |

+-----------+------------+--------------+---------------+

| C00001 | P0001 | T-SHIRTS | 4 |

| C00001 | P0345 | SHIRTS | 2 |

| C00001 | P06734 | COTTON JEANS | 1 |

| C00001 | P07885 | PULL OVERS | 2 |

| C00001 | P07965 | DEIM SHIRTS | 2 |

| C00002 | P0001 | T-SHIRTS | 10 |

+-----------+------------+--------------+---------------+

6 rows in set (0.01 sec)

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

**B) Exercise on subqueries**

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

**1)Find the Product\_No and Description of non-moving products i.e. Products not beign sold.**

mysql> SELECT PRODUCT\_NO, DESCRIPTION FROM PRODUCT\_MASTER WHERE PRODUCT\_NO NOT IN(SELECT PRODUCT\_NO FROM SALES\_ORDER\_DETAILS);

+------------+-------------+

| PRODUCT\_NO | DESCRIPTION |

+------------+-------------+

| P07865 | JEANS |

| P08865 | SKIRTS |

+------------+-------------+

2 rows in set (0.00 sec)

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**2)** **List the customer name, address1, address2, city and pincode for the client who has placed Order\_No ‘O19001’.**

mysql> SELECT NAME, ADDRESS1,ADDRESS2, CITY, STATE, PINCODE FROM CLIENT\_MASTER WHERE CLIENT\_NO IN(SELECT CLIENT\_NO FROM SALES\_ORDER WHERE ORDER\_NO = 'O19001');

+--------------+----------+----------+--------+-------------+---------+

| NAME | ADDRESS1 | ADDRESS2 | CITY | STATE | PINCODE |

+--------------+----------+----------+--------+-------------+---------+

| IVAN BAYROSS | NASHIK | YEOLA | MUMBAI | MAHARASHTRA | 400054 |

+--------------+----------+----------+--------+-------------+---------+

1 row in set (0.00 sec)

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**3) List the client names that have placed orders before the month of May’02.**

mysql> SELECT CLIENT\_NO, NAME FROM CLIENT\_MASTER WHERE CLIENT\_NO IN(SELECT CLIENT\_NO FROM SALES\_ORDER WHERE DATE\_FORMAT(ORDER\_DATE, 'MON,YY') < 'MAY,02');

Empty set (0.00 sec)

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**4) List if the product ‘LYCRA TOP’ has been ordered by any client and print the Client\_No, name to whom it was sold.**

mysql> SELECT CLIENT\_NO, NAME FROM CLIENT\_MASTER WHERE CLIENT\_NO IN(SELECT CLIENT\_NO FROM SALES\_ORDER WHERE ORDER\_NO IN(SELECT ORDER\_NO FROM SALES\_ORDER\_DETAILS WHERE PRODUCT\_NO IN(SELECT PRODUCT\_NO FROM PRODUCT\_MASTER WHERE DESCRIPTION = 'LYCRA TOPS')));

+-----------+---------------+

| CLIENT\_NO | NAME |

+-----------+---------------+

| C00004 | ASHWINI JOSHI |

| C00005 | HANSEL COLACO |

+-----------+---------------+

2 rows in set (0.00 sec)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**5)List the names of clients who have placed orders worth Rs. 10000 or more.**

mysql> SELECT NAME FROM CLIENT\_MASTER WHERE CLIENT\_NO IN(SELECT CLIENT\_NO FROM SALES\_ORDER WHERE ORDER\_NO IN(SELECT ORDER\_NO FROM SALES\_ORDER\_DETAILS WHERE(QTY\_ORDERED \* PRODUCT\_RATE) >= 10000));

+---------------+

| NAME |

+---------------+

| IVAN BAYROSS |

| CHHAYA BANKER |

+---------------+

2 rows in set (0.00 sec)

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