DATABASE MANAGEMENT SYSTEM LAB

DBMS LAB (ETCS - 256)

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INDEX

Expt. No.	Experiment Name	Date of Performance	Date of Checking	Marks	Signature
2.	Creation of Database/Tables and Insertion of data.	08.04.21			
3.	Write queries for retrieving records from table using SELECT command and WHERE clause.	15.04.21			
4.	Write SQL commands for implementing ALTER, UPDATE and DELETE.	22.04.21			
5.	Write the queries to implement the concept of Integrity Constraints like Primary Key, Foreign Key, NOT NULL to the tables.	20.05.21			

EXPERIMENT – 2

AIM: Creation of Database / Tables and Insertion of data.

Tools Used:

1. MariaDB

Creation of Table:

1. **Table Name:**   CLIENT_MASTER
2. **Description:**   Used to store Client Information

Commands used for Creating Table:

→ CREATE TABLE CLIENT_MASTER (
→ CLIENT_NO CHAR(6),
→ NAME VARCHAR(20),
→ ADDRESS1 VARCHAR(30),
→ ADDRESS2 VARCHAR(30),
→ CITY VARCHAR(15),
→ PINCODE INT(8),
→ STATE VARCHAR(15),
→ BAL_DUE FLOAT(10,2));

```
MariaDB [(none)]> use info
Database changed
MariaDB [info]> CREATE TABLE CLIENT_MASTER (
    -> CLIENT_NO CHAR(6),
    -> NAME VARCHAR(20),
    -> ADDRESS1 VARCHAR(30),
    -> ADDRESS2 VARCHAR(30),
    -> CITY VARCHAR(15),
    -> PINCODE INT(8),
    -> STATE VARCHAR(15),
    -> BAL_DUE FLOAT(10,2));
Query OK, 0 rows affected (0.021 sec)
```

Describing Schema of the Table:

Commands used:

→ DESCRIBE CLIENT_MASTER or DESC CLIENT_MASTER;

```
MariaDB [info]> DESC CLIENT_MASTER;
+-----------+-------------+------+-----+---------+-------+
| Field     | Type        | Null | Key | Default | Extra |
+-----------+-------------+------+-----+---------+-------+
| CLIENT_NO | char(6)     | YES  |     | NULL    |       |
| NAME      | varchar(20) | YES  |     | NULL    |       |
| ADDRESS1  | varchar(30) | YES  |     | NULL    |       |
| ADDRESS2  | varchar(30) | YES  |     | NULL    |       |
| CITY      | varchar(15) | YES  |     | NULL    |       |
| PINCODE   | int(8)      | YES  |     | NULL    |       |
| STATE     | varchar(15) | YES  |     | NULL    |       |
| BAL_DUE   | float(10,2) | YES  |     | NULL    |       |
+-----------+-------------+------+-----+---------+-------+
8 rows in set (0.034 sec)
```

Creation of Table:

1. **Table Name:**   PRODUCT_MASTER
2. **Description:**   Used to store Product Information of the Client

Commands used for Creating Table:

→ CREATE TABLE PRODUCT_MASTER (
→ PRODUCT_NO VARCHAR(6),
→ DESCRIPTION VARCHAR(15),
→ PROFIT_PERCENT FLOAT(4,2),
→ UNIT_MEASURE VARCHAR(10),
→ QTY_ON_HEAD INT(8),
→ REORDER_LVL INT(8),
→ SELL_PRICE FLOAT(8,2),

```
MariaDB [info]> CREATE TABLE PRODUCT_MASTER (
    -> PRODUCT_NO VARCHAR(6),
    -> DESCRIPTION VARCHAR(15),
    -> PROFIT_PERCENT FLOAT(4,2),
    -> UNIT_MEASURE VARCHAR(10),
    -> QTY_ON_HEAD INT(8),
    -> REORDER_LVL INT(8),
    -> SELL_PRICE FLOAT(8,2),
    -> COST_PRICE FLOAT(8,2));
Query OK, 0 rows affected (0.011 sec)
```

→ COST_PRICE FLOAT(8,2));

Describing Schema of the Table:

Commands used:

```
MariaDB [info]> DESCRIBE PRODUCT_MASTER;
+----------------+-------------+------+-----+---------+-------+
| Field          | Type        | Null | Key | Default | Extra |
+----------------+-------------+------+-----+---------+-------+
| PRODUCT_NO     | varchar(6)  | YES  |     | NULL    |       |
| DESCRIPTION    | varchar(15) | YES  |     | NULL    |       |
| PROFIT_PERCENT | float(4,2)  | YES  |     | NULL    |       |
| UNIT_MEASURE   | varchar(10) | YES  |     | NULL    |       |
| QTY_ON_HEAD    | int(8)      | YES  |     | NULL    |       |
| REORDER_LVL    | int(8)      | YES  |     | NULL    |       |
| SELL_PRICE     | float(8,2)  | YES  |     | NULL    |       |
| COST_PRICE     | float(8,2)  | YES  |     | NULL    |       |
+----------------+-------------+------+-----+---------+-------+
8 rows in set (0.029 sec)
```

➔ DESCRIBE PRODUCT_MASTER or DESC PRODUCT_MASTER;

Creation of Table:

1. **Table Name:**   SALESMAN_MASTER
2. **Description:**   Used to store Salesman Working Informatio

Commands for Creating Table:

- → CREATE TABLE SALESMAN_MASTER (
- → SALESMAN_NO VARCHAR(6),
- → SALESMAN_NAME VARCHAR(20),
- → ADDRESS1 VARCHAR(30),
- → ADDRESS2 VARCHAR(30),
- → CITY VARCHAR(20),
- → PINCODE INT(8),
- → STATE VARCHAR(20),
- → SAL_AMT FLOAT(8,2),
- → TGT_TO_GET FLOAT(6,2),
- → YTD_SALES FLOAT(6,2),
- → REMARKS VARCHAR(60));

```
MariaDB [info]> CREATE TABLE SALESMAN_MASTER (
    -> SALESMAN_NO VARCHAR(6),
    -> SALESMAN_NAME VARCHAR(20),
    -> ADDRESS1 VARCHAR(30),
    -> ADDRESS2 VARCHAR(30),
    -> CITY VARCHAR(20),
    -> PINCODE INT(8),
    -> STATE VARCHAR(20),
    -> SAL_AMT FLOAT(8,2),
    -> TGT_TO_GET FLOAT(6,2),
    -> YTD_SALES FLOAT(6,2),
    -> REMARKS VARCHAR(60));
Query OK, 0 rows affected (0.011 sec)
```

Describing Schema of the Table:

Commands used:

➜ DESCRIBE SALESMAN_MASTER or DESC SALESMAN_MASTER;

```
MariaDB [info]> DESCRIBE SALESMAN_MASTER;
+---------------+-------------+------+-----+---------+-------+
| Field         | Type        | Null | Key | Default | Extra |
+---------------+-------------+------+-----+---------+-------+
| SALESMAN_NO   | varchar(6)  | YES  |     | NULL    |       |
| SALESMAN_NAME | varchar(20) | YES  |     | NULL    |       |
| ADDRESS1      | varchar(30) | YES  |     | NULL    |       |
| ADDRESS2      | varchar(30) | YES  |     | NULL    |       |
| CITY          | varchar(20) | YES  |     | NULL    |       |
| PINCODE       | int(8)      | YES  |     | NULL    |       |
| STATE         | varchar(20) | YES  |     | NULL    |       |
| SAL_AMT       | float(8,2)  | YES  |     | NULL    |       |
| TGT_TO_GET    | float(6,2)  | YES  |     | NULL    |       |
| YTD_SALES     | float(6,2)  | YES  |     | NULL    |       |
| REMARKS       | varchar(60) | YES  |     | NULL    |       |
+---------------+-------------+------+-----+---------+-------+
11 rows in set (0.027 sec)
```

Inserting Data in the Tables:

Table Name: CLIENT_MASTER

Commands used:

→ INSERT INTO CLIENT_MASTER VALUES ('C00001', 'Ivan','','', 'Mumbai', '400054', 'Maharashtra', '15000');

→ INSERT INTO CLIENT_MASTER VALUES ('C00002', 'Mamta Muzumdar','','','Madras', '780001', 'Tamil Nadu', '0');

→ INSERT INTO CLIENT_MASTER VALUES ('C00003', 'Chhaya Bankar','','', 'Mumbai', '400057', 'Maharashtra', '5000');

→ INSERT INTO CLIENT_MASTER VALUES ('C00004', 'Ashwini Joshi','','', 'Banglore', '560001', 'Karnataka','0');

→ INSERT INTO CLIENT_MASTER VALUES ('C00005', 'Hansel Colaco','','','Mumbai', '400060', 'Maharashtra','2000');

→ INSERT INTO CLIENT_MASTER VALUES ('C00006', 'Deepak Sharma','','', 'Mangalore', '560050', 'Karnataka', '0');

```
MariaDB [info]> INSERT INTO CLIENT_MASTER VALUES ('C00001', 'Ivan','','', 'Mumbai', '400054', 'Maharashtra', '15000');
Query OK, 1 row affected (0.004 sec)

MariaDB [info]> INSERT INTO CLIENT_MASTER VALUES ('C00002', 'Mamta Muzumdar','','','Madras', '780001', 'Tamil Nadu', '0');
Query OK, 1 row affected (0.003 sec)

MariaDB [info]> INSERT INTO CLIENT_MASTER VALUES ('C00003', 'Chhaya Bankar','','', 'Mumbai', '400057', 'Maharashtra', '5000');

Query OK, 1 row affected (0.001 sec)

MariaDB [info]> INSERT INTO CLIENT_MASTER VALUES ('C00004', 'Ashwini Joshi','','', 'Banglore', '560001', 'Karnataka','0');
Query OK, 1 row affected (0.001 sec)

MariaDB [info]> INSERT INTO CLIENT_MASTER VALUES ('C00005', 'Hansel Colaco','','','Mumbai', '400060', 'Maharashtra','2000');
Query OK, 1 row affected (0.001 sec)

MariaDB [info]> INSERT INTO CLIENT_MASTER VALUES ('C00006', 'Deepak Sharma','','', 'Mangalore', '560050', 'Karnataka', '0');
Query OK, 1 row affected (0.003 sec)
```

Display Table: SELECT * FROM CLIENT_MASTER;

```
MariaDB [info]> SELECT * FROM CLIENT_MASTER;
+-----------+----------------+----------+----------+-----------+---------+-------------+----------+
| CLIENT_NO | NAME           | ADDRESS1 | ADDRESS2 | CITY      | PINCODE | STATE       | BAL_DUE  |
+-----------+----------------+----------+----------+-----------+---------+-------------+----------+
| C00001    | Ivan           |          |          | Mumbai    | 400054  | Maharashtra | 15000.00 |
| C00002    | Mamta Muzumdar |          |          | Madras    | 780001  | Tamil Nadu  |     0.00 |
| C00003    | Chhaya Bankar  |          |          | Mumbai    | 400057  | Maharashtra |  5000.00 |
| C00004    | Ashwini Joshi  |          |          | Banglore  | 560001  | Karnataka   |     0.00 |
| C00005    | Hansel Colaco  |          |          | Mumbai    | 400060  | Maharashtra |  2000.00 |
| C00006    | Deepak Sharma  |          |          | Mangalore | 560050  | Karnataka   |     0.00 |
+-----------+----------------+----------+----------+-----------+---------+-------------+----------+
6 rows in set (0.001 sec)
```

Table Name: PRODUCT_MASTER

→ INSERT INTO product_master VALUES('P00001','T-shirts',5,'Piece',200,50,5350,250);
→ INSERT INTO product_master VALUES('P00345','Shirts',6,'Piece',150,50,500,350);
→ INSERT INTO product_master VALUES('P06734','CottonJeans',5,'Piece',100,20,600,450);
→ INSERT INTO product_master VALUES('P07865','Jeans',5,'Piece',100,20,750,500);
→ INSERT INTO product_master VALUES('P07868','Trousers',2,'Piece',150,50,850,550);
→ INSERT INTO product_master VALUES('P07885','PullOvers',2.5,'Piece',80,30,700,450);
→ INSERT INTO product_master VALUES('P07965','DenimShirts',4,'Piece',100,40,350,250);
→ INSERT INTO product_master VALUES('P07975','LycraTops',5,'Piece',70,30,300,175);
→ INSERT INTO product_master VALUES('P08865','Skirts',5,'piece',75,30,450,300);

```
MariaDB [info]> INSERT INTO product_master VALUES('P00001','T-shirts',5,'Piece',200,50,5350,250);
Query OK, 1 row affected (0.004 sec)

MariaDB [info]> INSERT INTO product_master VALUES('P00345','Shirts',6,'Piece',150,50,500,350);
Query OK, 1 row affected (0.002 sec)

MariaDB [info]> INSERT INTO product_master VALUES('P06734','CottonJeans',5,'Piece',100,20,600,450);
Query OK, 1 row affected (0.002 sec)

MariaDB [info]> INSERT INTO product_master VALUES('P07865','Jeans',5,'Piece',100,20,750,500);
Query OK, 1 row affected (0.002 sec)

MariaDB [info]> INSERT INTO product_master VALUES('P07868','Trousers',2,'Piece',150,50,850,550);
Query OK, 1 row affected (0.001 sec)

MariaDB [info]> INSERT INTO product_master VALUES('P07885','PullOvers',2.5,'Piece',80,30,700,450);
Query OK, 1 row affected (0.003 sec)

MariaDB [info]> INSERT INTO product_master VALUES('P07965','DenimShirts',4,'Piece',100,40,350,250);
Query OK, 1 row affected (0.002 sec)

MariaDB [info]> INSERT INTO product_master VALUES('P07975','LycraTops',5,'Piece',70,30,300,175);
Query OK, 1 row affected (0.001 sec)

MariaDB [info]> INSERT INTO product_master VALUES('P08865','Skirts',5,'piece',75,30,450,300);
Query OK, 1 row affected (0.002 sec)
```

Display Table: SELECT * FROM PRDOUCT_MASTER;

```
MariaDB [info]> SELECT * FROM PRODUCT_MASTER;
+------------+-------------+----------------+--------------+-------------+-------------+------------+------------+
| PRODUCT_NO | DESCRIPTION | PROFIT_PERCENT | UNIT_MEASURE | QTY_ON_HEAD | REORDER_LVL | SELL_PRICE | COST_PRICE |
+------------+-------------+----------------+--------------+-------------+-------------+------------+------------+
| P00001     | T-shirts    |           5.00 | Piece        |         200 |          50 |    5350.00 |     250.00 |
| P00345     | Shirts      |           6.00 | Piece        |         150 |          50 |     500.00 |     350.00 |
| P06734     | CottonJeans |           5.00 | Piece        |         100 |          20 |     600.00 |     450.00 |
| P07865     | Jeans       |           5.00 | Piece        |         100 |          20 |     750.00 |     500.00 |
| P07868     | Trousers    |           2.00 | Piece        |         150 |          50 |     850.00 |     550.00 |
| P07885     | PullOvers   |           2.50 | Piece        |          80 |          30 |     700.00 |     450.00 |
| P07965     | DenimShirts |           4.00 | Piece        |         100 |          40 |     350.00 |     250.00 |
| P07975     | LycraTops   |           5.00 | Piece        |          70 |          30 |     300.00 |     175.00 |
| P08865     | Skirts      |           5.00 | piece        |          75 |          30 |     450.00 |     300.00 |
+------------+-------------+----------------+--------------+-------------+-------------+------------+------------+
9 rows in set (0.000 sec)
```

Table Name: SALESMAN_MASTER

→ INSERT INTO SALESMAN_MASTER VALUES ('S00001','Aman','A/14','Worli', 'Mumbai','400002','Maharashtra','3000','100','50','Good');

→ INSERT INTO SALESMAN_MASTER VALUES('S00002','Omkar','65','Nariman','Mumbai','400002','Maharashtra','3000','0','100','Good');

→ INSERT INTO SALESMAN_MASTER VALUES ('S00003','Raj','P/7','Bandra', 'Mumbai','400002','Maharashtra','3000','200','100','Good');

→ INSERT INTO SALESMAN_MASTER VALUES ('S00004','Ashish','A/5','Juhu', 'Mumbai','400044','Maharashtra','3500','200','150','Good');

```
MariaDB [info]> INSERT INTO SALESMAN_MASTER VALUES ('S00001','Aman','A/14','Worli', 'Mumbai','400002','Maharashtra','3000','100','50','Good');
Query OK, 1 row affected (0.003 sec)

MariaDB [info]> INSERT INTO SALESMAN_MASTER VALUES('S00002','Omkar','65','Nariman','Mumbai','400002','Maharashtra','3000','0','100','Good');
Query OK, 1 row affected (0.004 sec)

MariaDB [info]> INSERT INTO SALESMAN_MASTER VALUES ('S00003','Raj','P/7','Bandra', 'Mumbai','400002','Maharashtra','3000','200','100','Good');
Query OK, 1 row affected (0.001 sec)

MariaDB [info]> INSERT INTO SALESMAN_MASTER VALUES ('S00004','Ashish','A/5','Juhu', 'Mumbai','400044','Maharashtra','3500','200','150','Good');
Query OK, 1 row affected (0.001 sec)
```

Display Table: SELECT * FROM SALESMAN_MASTER;

```
MariaDB [info]> SELECT * FROM SALESMAN_MASTER;
+-------------+---------------+----------+----------+--------+---------+-------------+---------+------------+-----------+---------+
| SALESMAN_NO | SALESMAN_NAME | ADDRESS1 | ADDRESS2 | CITY   | PINCODE | STATE       | SAL_AMT | TGT_TO_GET | YTD_SALES | REMARKS |
+-------------+---------------+----------+----------+--------+---------+-------------+---------+------------+-----------+---------+
| S00001      | Aman          | A/14     | Worli    | Mumbai | 400002  | Maharashtra | 3000.00 |     100.00 |     50.00 | Good    |
| S00002      | Omkar         | 65       | Nariman  | Mumbai | 400002  | Maharashtra | 3000.00 |       0.00 |    100.00 | Good    |
| S00003      | Raj           | P/7      | Bandra   | Mumbai | 400002  | Maharashtra | 3000.00 |     200.00 |    100.00 | Good    |
| S00004      | Ashish        | A/5      | Juhu     | Mumbai | 400044  | Maharashtra | 3500.00 |     200.00 |    150.00 | Good    |
+-------------+---------------+----------+----------+--------+---------+-------------+---------+------------+-----------+---------+
4 rows in set (0.000 sec)
```

EXPERIMENT - 3

AIM: Write queries for retrieving records from table using SELECT command and WHERE clause.

Tools Used:

1. Maria DB

QUERIES ARE PERFORMED AS FOLLOWS: -

1. Find out the names of all the Clients

→ SELECT NAME FROM CLIENT_MASTER;

```
MariaDB [info]> SELECT NAME FROM CLIENT_MASTER;
+-----------------+
| NAME            |
+-----------------+
| Ivan            |
| Mamta Muzumdar  |
| Chhaya Bankar   |
| Ashwini Joshi   |
| Hansel Colaco   |
| Deepak Sharma   |
+-----------------+
6 rows in set (0.002 sec)
```

2. Retrieve the entire contents of the Client_Master table

→ SELECT * FROM CLIENT_MASTER;

```
MariaDB [info]> SELECT * FROM CLIENT_MASTER;
+-----------+----------------+----------+----------+-----------+---------+-------------+----------+
| CLIENT_NO | NAME           | ADDRESS1 | ADDRESS2 | CITY      | PINCODE | STATE       | BAL_DUE  |
+-----------+----------------+----------+----------+-----------+---------+-------------+----------+
| C00001    | Ivan           |          |          | Mumbai    | 400054  | Maharashtra | 15000.00 |
| C00002    | Mamta Muzumdar |          |          | Madras    | 780001  | Tamil Nadu  |     0.00 |
| C00003    | Chhaya Bankar  |          |          | Mumbai    | 400057  | Maharashtra |  5000.00 |
| C00004    | Ashwini Joshi  |          |          | Banglore  | 560001  | Karnataka   |     0.00 |
| C00005    | Hansel Colaco  |          |          | Mumbai    | 400060  | Maharashtra |  2000.00 |
| C00006    | Deepak Sharma  |          |          | Mangalore | 560050  | Karnataka   |     0.00 |
+-----------+----------------+----------+----------+-----------+---------+-------------+----------+
6 rows in set (0.000 sec)
```

3. Retrieve the list of names, cities and the states of all the clients

→ SELECT NAME, CITY, STATE FROM CLIENT_MASTER;

```
MariaDB [info]> SELECT NAME, CITY, STATE FROM CLIENT_MASTER;
+----------------+-----------+-------------+
| NAME           | CITY      | STATE       |
+----------------+-----------+-------------+
| Ivan           | Mumbai    | Maharashtra |
| Mamta Muzumdar | Madras    | Tamil Nadu  |
| Chhaya Bankar  | Mumbai    | Maharashtra |
| Ashwini Joshi  | Banglore  | Karnataka   |
| Hansel Colaco  | Mumbai    | Maharashtra |
| Deepak Sharma  | Mangalore | Karnataka   |
+----------------+-----------+-------------+
6 rows in set (0.000 sec)
```

4. Find names of clients from Client_Master whose Bal_Due is Rs.0

→ SELECT NAME FROM CLIENT_MASTER where BAL_DUE = '0';

```
MariaDB [info]> SELECT NAME FROM CLIENT_MASTER where BAL_DUE = '0';
+----------------+
| NAME           |
+----------------+
| Mamta Muzumdar |
| Ashwini Joshi  |
| Deepak Sharma  |
+----------------+
3 rows in set (0.007 sec)
```

5. List all the clients who are located in Mumbai.

→ SELECT NAME FROM CLIENT_MASTER where CITY = 'Mumbai';

```
MariaDB [info]> SELECT NAME FROM CLIENT_MASTER where CITY = 'Mumbai';
+----------------+
| NAME           |
+----------------+
| Ivan           |
| Chhaya Bankar  |
| Hansel Colaco  |
+----------------+
3 rows in set (0.003 sec)
```

6. List the various products available from the Product_Master table

→ SELECT DESCRIPTION FROM PRODUCT_MASTER;

```
MariaDB [info]> SELECT DESCRIPTION FROM PRODUCT_MASTER;
+-------------+
| DESCRIPTION |
+-------------+
| T-shirts    |
| Shirts      |
| CottonJeans |
| Jeans       |
| Trousers    |
| PullOvers   |
| DenimShirts |
| LycraTops   |
| Skirts      |
+-------------+
9 rows in set (0.000 sec)
```

7. Find the names of salesman who have Sal_Amt = Rs.3000

→ SELECT SALESMAN_NAME FROM SALESMAN_MASTER where SAL_AMT = '3000';

```
MariaDB [info]> SELECT SALESMAN_NAME FROM SALESMAN_MASTER where SAL_AMT = '3000';
+---------------+
| SALESMAN_NAME |
+---------------+
| Aman          |
| Omkar         |
| Raj           |
+---------------+
3 rows in set (0.000 sec)
```

8. List all Salesman_No who live in city Mumbai

→ SELECT SALESMAN_NO FROM SALESMAN_MASTER where CITY = 'Mumbai';

```
MariaDB [info]> SELECT SALESMAN_NO FROM SALESMAN_MASTER where CITY = 'Mumbai';
+-------------+
| SALESMAN_NO |
+-------------+
| S00001      |
| S00002      |
| S00003      |
| S00004      |
+-------------+
4 rows in set (0.000 sec)
```

9. <u>Find Product_No whose Price = Rs.150</u>

→ SELECT DESCRIPTION FROM PRODUCT_MASTER WHERE COST_PRICE = '150'
  or SELL_PRICE = '150';

```
MariaDB [info]> SELECT DESCRIPTION FROM PRODUCT_MASTER WHERE COST_PRICE = '150' or SELL_PRICE = '150';
Empty set (0.000 sec)
```

10. <u>Find Product_No of T-Shirts in Product_Master table</u>

→ SELECT PRODUCT_NO FROM PRODUCT_MASTER where DESCRIPTION = 'T-Shirts';

```
MariaDB [info]> SELECT PRODUCT_NO FROM PRODUCT_MASTER where DESCRIPTION = 'T-Shirts';
+------------+
| PRODUCT_NO |
+------------+
| P00001     |
+------------+
1 row in set (0.000 sec)
```

EXPERIMENT - 4

AIM: **Write SQL commands for implementing ALTER, UPDATE and DELETE.**

Tools Used:

1. MariaDB

QUERIES ARE PERFORMED AS FOLLOWS: -

1. Change the City of Client_No 'C00005' to 'Bangalore'

```
UPDATE CLIENT_MASTER
```

```
MariaDB [info]> UPDATE CLIENT_MASTER
    -> SET CITY = 'Bangalore'
    -> WHERE CLIENT_NO = 'C00005';
Query OK, 1 row affected (0.004 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

→ SET CITY = 'Bangalore'
→ WHERE CLIENT_NO = 'C00005';

```
MariaDB [info]> SELECT * FROM CLIENT_MASTER;
+-----------+----------------+----------+----------+-----------+---------+-------------+----------+
| CLIENT_NO | NAME           | ADDRESS1 | ADDRESS2 | CITY      | PINCODE | STATE       | BAL_DUE  |
+-----------+----------------+----------+----------+-----------+---------+-------------+----------+
| C00001    | Ivan           |          |          | Mumbai    | 400054  | Maharashtra | 15000.00 |
| C00002    | Mamta Muzumdar |          |          | Madras    | 780001  | Tamil Nadu  |     0.00 |
| C00003    | Chhaya Bankar  |          |          | Mumbai    | 400057  | Maharashtra |  5000.00 |
| C00004    | Ashwini Joshi  |          |          | Bangalore | 560001  | Karnataka   |     0.00 |
| C00005    | Hansel Colaco  |          |          | Bangalore | 400060  | Maharashtra |  2000.00 |
| C00006    | Deepak Sharma  |          |          | Mangalore | 560050  | Karnataka   |     0.00 |
+-----------+----------------+----------+----------+-----------+---------+-------------+----------+
6 rows in set (0.000 sec)
```

Altered Data is: -

2. Change the Bal_Due of Client_No 'C00001' to Rs.1000

```
MariaDB [info]> UPDATE CLIENT_MASTER
    -> SET BAL_DUE = '1000'
    -> WHERE CLIENT_NO = 'C00001';
Query OK, 1 row affected (0.004 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

UPDATE CLIENT_MASTER

```
MariaDB [info]> SELECT * FROM CLIENT_MASTER;
+-----------+----------------+----------+----------+-----------+---------+-------------+---------+
| CLIENT_NO | NAME           | ADDRESS1 | ADDRESS2 | CITY      | PINCODE | STATE       | BAL_DUE |
+-----------+----------------+----------+----------+-----------+---------+-------------+---------+
| C00001    | Ivan           |          |          | Mumbai    | 400054  | Maharashtra | 1000.00 |
| C00002    | Mamta Muzumdar |          |          | Madras    | 780001  | Tamil Nadu  |    0.00 |
| C00003    | Chhaya Bankar  |          |          | Mumbai    | 400057  | Maharashtra | 5000.00 |
| C00004    | Ashwini Joshi  |          |          | Bangalore | 560001  | Karnataka   |    0.00 |
| C00005    | Hansel Colaco  |          |          | Bangalore | 400060  | Maharashtra | 2000.00 |
| C00006    | Deepak Sharma  |          |          | Mangalore | 560050  | Karnataka   |    0.00 |
+-----------+----------------+----------+----------+-----------+---------+-------------+---------+
6 rows in set (0.000 sec)
```

→ SET BAL_DUE = '1000'
→ WHERE CLIENT_NO = 'C00001';

Altered Data is: -

3. Change the Cost_Price of 'Trousers' to Rs.950

UPDATE PRODUCT_MASTER
→ SET COST_PRICE = '950'

→ WHERE DESCRIPTION = 'Trousers';

4. <u>Change the City of the Salesman to 'Pune'</u>

UPDATE SALESMAN_MASTER
→ SET CITY = 'Pune';

```
MariaDB [info]> UPDATE SALESMAN_MASTER
    -> SET CITY = 'Pune';
Query OK, 4 rows affected (0.003 sec)
Rows matched: 4  Changed: 4  Warnings: 0
```

```
MariaDB [info]> SELECT * FROM SALESMAN_MASTER;
+------------+---------------+----------+----------+------+---------+-------------+----------+------------+-----------+---------+
| SALESMAN_NO | SALESMAN_NAME | ADDRESS1 | ADDRESS2 | CITY | PINCODE | STATE       | SAL_AMT  | TGT_TO_GET | YTD_SALES | REMARKS |
+------------+---------------+----------+----------+------+---------+-------------+----------+------------+-----------+---------+
| S00001      | Aman          | A/14     | Worli    | Pune | 400002  | Maharashtra | 3000.00  |    100.00  |     50.00 | Good    |
| S00002      | Omkar         | 65       | Nariman  | Pune | 400002  | Maharashtra | 3000.00  |      0.00  |    100.00 | Good    |
| S00003      | Raj           | P/7      | Bandra   | Pune | 400002  | Maharashtra | 3000.00  |    200.00  |    100.00 | Good    |
| S00004      | Ashish        | A/5      | Juhu     | Pune | 400044  | Maharashtra | 3500.00  |    200.00  |    150.00 | Good    |
+------------+---------------+----------+----------+------+---------+-------------+----------+------------+-----------+---------+
4 rows in set (0.000 sec)
```

`6 rows in set (0.000 sec)`

<u>Altered Data is: -</u>

5. <u>Delete all Salesman from the Salesman_Master whose salaries are equal to Rs. 3500</u>

```
MariaDB [info]> UPDATE PRODUCT_MASTER
    -> SET COST_PRICE = '950'
    -> WHERE DESCRIPTION = 'Trousers';
Query OK, 1 row affected (0.003 sec)
Rows matched: 1  Changed: 1  Warnings: 0

MariaDB [info]> SELECT * FROM PRODUCT_MASTER;
+------------+-------------+----------------+--------------+-------------+------------+------------+------------+
| PRODUCT_NO | DESCRIPTION | PROFIT_PERCENT | UNIT_MEASURE | QTY_ON_HEAD | REORDER_LVL | SELL_PRICE | COST_PRICE |
+------------+-------------+----------------+--------------+-------------+------------+------------+------------+
| P00001     | T-shirts    |           5.00 | Piece        |         200 |         50 |    5350.00 |     250.00 |
| P00345     | Shirts      |           6.00 | Piece        |         150 |         50 |     500.00 |     350.00 |
| P06734     | CottonJeans |           5.00 | Piece        |         100 |         20 |     600.00 |     450.00 |
| P07865     | Jeans       |           5.00 | Piece        |         100 |         20 |     750.00 |     500.00 |
| P07868     | Trousers    |           2.00 | Piece        |         150 |         50 |     850.00 |     950.00 |
| P07885     | PullOvers   |           2.50 | Piece        |          80 |         30 |     700.00 |     450.00 |
| P07965     | DenimShirts |           4.00 | Piece        |         100 |         40 |     350.00 |     250.00 |
| P07975     | LycraTops   |           5.00 | Piece        |          70 |         30 |     300.00 |     175.00 |
| P08865     | Skirts      |           5.00 | piece        |          75 |         30 |     450.00 |     300.00 |
+------------+-------------+----------------+--------------+-------------+------------+------------+------------+
9 rows in set (0.001 sec)
```

```
DELETE FROM SALESMAN_MASTER
➔ WHERE SAL_AMT = '3500';
```

Altered Data is: -

6. Delete all Products from Product_Master where the

```
MariaDB [info]> SELECT * FROM PRODUCT_MASTER;
+------------+-------------+----------------+--------------+-------------+-------------+------------+------------+
| PRODUCT_NO | DESCRIPTION | PROFIT_PERCENT | UNIT_MEASURE | QTY_ON_HAND | REORDER_LVL | SELL_PRICE | COST_PRICE |
+------------+-------------+----------------+--------------+-------------+-------------+------------+------------+
| P00001     | T-shirts    |           5.00 | Piece        |         200 |          50 |    5350.00 |     250.00 |
| P0345      | Shirts      |           6.00 | Piece        |         150 |          50 |     500.00 |     350.00 |
| P06734     | CottonJeans |           5.00 | Piece        |         100 |          20 |     600.00 |     450.00 |
| P07865     | Jeans       |           5.00 | Piece        |         100 |          20 |     750.00 |     500.00 |
| P07868     | Trousers    |           2.00 | Piece        |         150 |          50 |     850.00 |     950.00 |
| P07885     | PullOvers   |           2.50 | Piece        |          80 |          30 |     700.00 |     450.00 |
| P07965     | DenimShirts |           4.00 | Piece        |         100 |          40 |     350.00 |     250.00 |
| P07975     | LycraTops   |           5.00 | Piece        |          70 |          30 |     300.00 |     175.00 |
| P08865     | Skirts      |           5.00 | piece        |          75 |          30 |     450.00 |     300.00 |
+------------+-------------+----------------+--------------+-------------+-------------+------------+------------+
9 rows in set (0.000 sec)

MariaDB [info]> DELETE FROM PRODUCT_MASTER
    -> WHERE QTY_ON_HAND = '100';
Query OK, 3 rows affected (0.004 sec)

MariaDB [info]> SELECT * FROM PRODUCT_MASTER;
+------------+-------------+----------------+--------------+-------------+-------------+------------+------------+
| PRODUCT_NO | DESCRIPTION | PROFIT_PERCENT | UNIT_MEASURE | QTY_ON_HAND | REORDER_LVL | SELL_PRICE | COST_PRICE |
+------------+-------------+----------------+--------------+-------------+-------------+------------+------------+
| P00001     | T-shirts    |           5.00 | Piece        |         200 |          50 |    5350.00 |     250.00 |
| P0345      | Shirts      |           6.00 | Piece        |         150 |          50 |     500.00 |     350.00 |
| P07868     | Trousers    |           2.00 | Piece        |         150 |          50 |     850.00 |     950.00 |
| P07885     | PullOvers   |           2.50 | Piece        |          80 |          30 |     700.00 |     450.00 |
| P07975     | LycraTops   |           5.00 | Piece        |          70 |          30 |     300.00 |     175.00 |
| P08865     | Skirts      |           5.00 | piece        |          75 |          30 |     450.00 |     300.00 |
+------------+-------------+----------------+--------------+-------------+-------------+------------+------------+
6 rows in set (0.000 sec)
```

QtyOnHand = 100

```
DELETE FROM PRODUCT_MASTER
➔ WHERE QTY_ON_HAND = '100';
```

```
MariaDB [info]> DELETE FROM SALESMAN_MASTER
    -> WHERE SAL_AMT = '3500';
Query OK, 1 row affected (0.003 sec)
```

```
MariaDB [info]> SELECT * FROM SALESMAN_MASTER;
+------------+---------------+----------+----------+------+---------+-------------+---------+------------+-----------+---------+
| SALESMAN_NO | SALESMAN_NAME | ADDRESS1 | ADDRESS2 | CITY | PINCODE | STATE       | SAL_AMT | TGT_TO_GET | YTD_SALES | REMARKS |
+------------+---------------+----------+----------+------+---------+-------------+---------+------------+-----------+---------+
| S00001      | Aman          | A/14     | Worli    | Pune | 400002  | Maharashtra | 3000.00 |     100.00 |     50.00 | Good    |
| S00002      | Omkar         | 65       | Nariman  | Pune | 400002  | Maharashtra | 3000.00 |       0.00 |    100.00 | Good    |
| S00003      | Raj           | P/7      | Bandra   | Pune | 400002  | Maharashtra | 3000.00 |     200.00 |    100.00 | Good    |
+------------+---------------+----------+----------+------+---------+-------------+---------+------------+-----------+---------+
3 rows in set (0.001 sec)
```

7. Delete from Client_Master where the column state holds the value 'Tamil Nadu'

```
DELETE FROM CLIENT_MASTER
➔ WHERE STATE = 'Tamil Nadu';
```

```
MariaDB [info]> ALTER TABLE CLIENT_MASTER
    -> ADD TELEPHONE INT(10);
Query OK, 0 rows affected (0.007 sec)
Records: 0  Duplicates: 0  Warnings: 0

MariaDB [info]> SELECT * FROM CLIENT_MASTER;
+-----------+---------------+----------+----------+-----------+----------+-------------+----------+-----------+
| CLIENT_NO | NAME          | ADDRESS1 | ADDRESS2 | CITY      | PINCODE  | STATE       | BAL_DUE  | TELEPHONE |
+-----------+---------------+----------+----------+-----------+----------+-------------+----------+-----------+
| C00001    | Ivan          |          |          | Mumbai    | 400054   | Maharashtra | 1000.00  |      NULL |
| C00003    | Chhaya Bankar |          |          | Mumbai    | 400057   | Maharashtra | 5000.00  |      NULL |
| C00004    | Ashwini Joshi |          |          | Bangalore | 560001   | Karnataka   |    0.00  |      NULL |
| C00005    | Hansel Colaco |          |          | Bangalore | 400060   | Maharashtra | 2000.00  |      NULL |
| C00006    | Deepak Sharma |          |          | Mangalore | 560050   | Karnataka   |    0.00  |      NULL |
+-----------+---------------+----------+----------+-----------+----------+-------------+----------+-----------+
5 rows in set (0.007 sec)
```

8. Add a column called 'Telephone' of data type 'Number' and size = '10' to the Client_Master Table

```
ALTER TABLE CLIENT_MASTER
➔ ADD TELEPHONE INT(10);
```

9. Change the size of Sell_Price column in Product_Master to '10.2'

```
MariaDB [info]> SELECT * FROM CLIENT_MASTER;
+-----------+----------------+----------+----------+-----------+----------+-------------+----------+
| CLIENT_NO | NAME           | ADDRESS1 | ADDRESS2 | CITY      | PINCODE  | STATE       | BAL_DUE  |
+-----------+----------------+----------+----------+-----------+----------+-------------+----------+
| C00001    | Ivan           |          |          | Mumbai    | 400054   | Maharashtra | 1000.00  |
| C00002    | Mamta Muzumdar |          |          | Madras    | 780001   | Tamil Nadu  |    0.00  |
| C00003    | Chhaya Bankar  |          |          | Mumbai    | 400057   | Maharashtra | 5000.00  |
| C00004    | Ashwini Joshi  |          |          | Bangalore | 560001   | Karnataka   |    0.00  |
| C00005    | Hansel Colaco  |          |          | Bangalore | 400060   | Maharashtra | 2000.00  |
| C00006    | Deepak Sharma  |          |          | Mangalore | 560050   | Karnataka   |    0.00  |
+-----------+----------------+----------+----------+-----------+----------+-------------+----------+
6 rows in set (0.000 sec)

MariaDB [info]> DELETE FROM CLIENT_MASTER
    -> WHERE STATE = 'Tamil Nadu';
Query OK, 1 row affected (0.003 sec)

MariaDB [info]> SELECT * FROM CLIENT_MASTER;
+-----------+---------------+----------+----------+-----------+----------+-------------+----------+
| CLIENT_NO | NAME          | ADDRESS1 | ADDRESS2 | CITY      | PINCODE  | STATE       | BAL_DUE  |
+-----------+---------------+----------+----------+-----------+----------+-------------+----------+
| C00001    | Ivan          |          |          | Mumbai    | 400054   | Maharashtra | 1000.00  |
| C00003    | Chhaya Bankar |          |          | Mumbai    | 400057   | Maharashtra | 5000.00  |
| C00004    | Ashwini Joshi |          |          | Bangalore | 560001   | Karnataka   |    0.00  |
| C00005    | Hansel Colaco |          |          | Bangalore | 400060   | Maharashtra | 2000.00  |
| C00006    | Deepak Sharma |          |          | Mangalore | 560050   | Karnataka   |    0.00  |
+-----------+---------------+----------+----------+-----------+----------+-------------+----------+
5 rows in set (0.000 sec)
```

```
ALTER TABLE PRODUCT_MASTER
➜ MODIFY SELL_PRICE FLOAT(10,2);
```

10. <u>Destroy the table Client_Master along with its data</u>

```
➜ DROP TABLE CLIENT_MASTER;
```

```
MariaDB [info]> DROP TABLE CLIENT_MASTER
    -> ;
Query OK, 0 rows affected (0.013 sec)


MariaDB [info]> DESCRIBE CLIENT_MASTER;
ERROR 1146 (42S02): Table 'info.client_master' doesn't exist
```

11. <u>Change the name of the Salesman_Master table to SMAN_MAST</u>

```
➜ RENAME TABLE SALESMAN_MASTER TO SMAN_MAST;
```

```
MariaDB [info]> ALTER TABLE PRODUCT_MASTER
    -> MODIFY SELL_PRICE float(10,2);
Query OK, 0 rows affected (0.005 sec)
Records: 0  Duplicates: 0  Warnings: 0

MariaDB [info]> SELECT * FROM PROSUCT_MASTER;
ERROR 1146 (42S02): Table 'info.prosuct_master' doesn't exist
MariaDB [info]> SELECT * FROM PRODUCT_MASTER;
+------------+-------------+----------------+--------------+-------------+-------------+------------+------------+
| PRODUCT_NO | DESCRIPTION | PROFIT_PERCENT | UNIT_MEASURE | QTY_ON_HAND | REORDER_LVL | SELL_PRICE | COST_PRICE |
+------------+-------------+----------------+--------------+-------------+-------------+------------+------------+
| P00001     | T-shirts    |           5.00 | Piece        |         200 |          50 |    5350.00 |     250.00 |
| P0345      | Shirts      |           6.00 | Piece        |         150 |          50 |     500.00 |     350.00 |
| P07868     | Trousers    |           2.00 | Piece        |         150 |          50 |     850.00 |     950.00 |
| P07885     | PullOvers   |           2.50 | Piece        |          80 |          30 |     700.00 |     450.00 |
| P07975     | LycraTops   |           5.00 | Piece        |          70 |          30 |     300.00 |     175.00 |
| P08865     | Skirts      |           5.00 | piece        |          75 |          30 |     450.00 |     300.00 |
+------------+-------------+----------------+--------------+-------------+-------------+------------+------------+
6 rows in set (0.007 sec)
```

```
MariaDB [info]> RENAME TABLE SALESMAN_MASTER TO SMAN_MAST;
Query OK, 0 rows affected (0.010 sec)

MariaDB [info]> SELECT * FROM SMAN_MAST;
+-------------+---------------+----------+----------+------+---------+-------------+---------+------------+-----------+---------+
| SALESMAN_NO | SALESMAN_NAME | ADDRESS1 | ADDRESS2 | CITY | PINCODE | STATE       | SAL_AMT | TGT_TO_GET | YTD_SALES | REMARKS |
+-------------+---------------+----------+----------+------+---------+-------------+---------+------------+-----------+---------+
| S00001      | Aman          | A/14     | Worli    | Pune | 400002  | Maharashtra | 3000.00 |     100.00 |     50.00 | Good    |
| S00002      | Omkar         | 65       | Nariman  | Pune | 400002  | Maharashtra | 3000.00 |       0.00 |    100.00 | Good    |
| S00003      | Raj           | P/7      | Bandra   | Pune | 400002  | Maharashtra | 3000.00 |     200.00 |    100.00 | Good    |
+-------------+---------------+----------+----------+------+---------+-------------+---------+------------+-----------+---------+
3 rows in set (0.001 sec)
```

EXPERIMENT - 5

AIM: Write the queries to implement the concept of Integrity Constraints like Primary Key, Foreign Key, NOT NULL to the tables.

Tools Used:

1. MariaDB

1) Creation of Table:

1. **Table Name:**   CLIENT_MASTER2
2. **Description:**   Used to store Client Information

Commands used for Creating Table:

→ CREATE TABLE CLIENT_MASTER2 (
→ CLIENT_NO CHAR(6) PRIMARY KEY,
→ NAME VARCHAR(20) NOT NULL,
→ ADDRESS1 VARCHAR(30),
→ ADDRESS2 VARCHAR(30),
→ CITY VARCHAR(15),
→ PINCODE INT(8),
→ STATE VARCHAR(15),
→ BAL_DUE FLOAT(10,2));

```
MariaDB [info]> CREATE TABLE CLIENT_MASTER2 (
    -> CLIENT_NO CHAR(6) PRIMARY KEY,
    -> NAME VARCHAR(20) NOT NULL,
    -> ADDRESS1 VARCHAR(30),
    -> ADDRESS2 VARCHAR(30),
    -> CITY VARCHAR(15),
    -> PINCODE INT(8),
    -> STATE VARCHAR(15),
    -> BAL_DUE FLOAT(10,2));
Query OK, 0 rows affected (0.013 sec)
```

Describing Schema of the Table:
Commands used:

→ DESCRIBE CLIENT_MASTER2 or DESC CLIENT_MASTER2;

```
MariaDB [info]> DESCRIBE CLIENT_MASTER2;
+-----------+-------------+------+-----+---------+-------+
| Field     | Type        | Null | Key | Default | Extra |
+-----------+-------------+------+-----+---------+-------+
| CLIENT_NO | char(6)     | NO   | PRI | NULL    |       |
| NAME      | varchar(20) | NO   |     | NULL    |       |
| ADDRESS1  | varchar(30) | YES  |     | NULL    |       |
| ADDRESS2  | varchar(30) | YES  |     | NULL    |       |
| CITY      | varchar(15) | YES  |     | NULL    |       |
| PINCODE   | int(8)      | YES  |     | NULL    |       |
| STATE     | varchar(15) | YES  |     | NULL    |       |
| BAL_DUE   | float(10,2) | YES  |     | NULL    |       |
+-----------+-------------+------+-----+---------+-------+
8 rows in set (0.016 sec)
```

2) Creation of Table:

1. **Table Name:**   PRODUCT_MASTER2
2. **Description:**   Used to store Prdouct Information

Commands for Creating Table:

→ CREATE TABLE PRODUCT_MASTER2(
→ PRODUCT_NO VARCHAR(6) PRIMARY KEY,
→ DESCRIPTION VARCHAR(15) NOT NULL,
→ PROFIT_PERCENT FLOAT(4,2) NOT NULL,
→ UNIT_MEASURE VARCHAR(10) NOT NULL,
→ QTY_ON_HEAD INT(8) NOT NULL,
→ REORDER_LVL INT(8) NOT NULL,
→ SELL_PRICE FLOAT(8,2) NOT NULL,
→ COST_PRICE FLOAT(8,2) NOT NULL);

```
MariaDB [info]> CREATE TABLE PRODUCT_MASTER2(
    -> PRODUCT_NO VARCHAR(6) PRIMARY KEY,
    -> DESCRIPTION VARCHAR(15) NOT NULL,
    -> PROFIT_PERCENT FLOAT(4,2) NOT NULL,
    -> UNIT_MEASURE VARCHAR(10) NOT NULL,
    -> QTY_ON_HAND INT(8) NOT NULL,
    -> REORDER_LVL INT(8) NOT NULL,
    -> SELL_PRICE FLOAT(8,2) NOT NULL,
    -> COST_PRICE FLOAT(8,2) NOT NULL);
Query OK, 0 rows affected (0.013 sec)
```

Describing Schema of the Table:

Commands used:

→ DESCRIBE PRODUCT_MASTER2 or DESC PRODUCT_MASTER2;

```
MariaDB [info]> DESC PRODUCT_MASTER2;
+----------------+-------------+------+-----+---------+-------+
| Field          | Type        | Null | Key | Default | Extra |
+----------------+-------------+------+-----+---------+-------+
| PRODUCT_NO     | varchar(6)  | NO   | PRI | NULL    |       |
| DESCRIPTION    | varchar(15) | NO   |     | NULL    |       |
| PROFIT_PERCENT | float(4,2)  | NO   |     | NULL    |       |
| UNIT_MEASURE   | varchar(10) | NO   |     | NULL    |       |
| QTY_ON_HAND    | int(8)      | NO   |     | NULL    |       |
| REORDER_LVL    | int(8)      | NO   |     | NULL    |       |
| SELL_PRICE     | float(8,2)  | NO   |     | NULL    |       |
| COST_PRICE     | float(8,2)  | NO   |     | NULL    |       |
+----------------+-------------+------+-----+---------+-------+
8 rows in set (0.011 sec)
```

3) Creation of Table:

1) **Table Name:**　　SALESMAN_MASTER2
2) **Description:**　　Used to store Salesman Information

Commands for Creating Table:

→ CREATE TABLE SALESMAN_MASTER (
→ SALESMAN_NO VARCHAR(6) PRIMARY KEY,
→ SALESMAN_NAME VARCHAR(20) NOT NULL,
→ ADDRESS1 VARCHAR(30) NOT NULL,
→ ADDRESS2 VARCHAR(30),
→ CITY VARCHAR(20),
→ PINCODE INT(8),
→ STATE VARCHAR(20),
→ SAL_AMT FLOAT(8,2) NOT NULL,
→ TGT_TO_GET FLOAT(6,2) NOT NULL,
→ YTD_SALES FLOAT(6,2) NOT NULL,
→ REMARKS VARCHAR(60),
→ CONSTRAINT CK_SALESMAN_NO CHECK(SALESMAN_NO LIKE "S%"),
→ CONSTRAINT CK_SAL_AMT CHECK(SAL_AMT != 0),
→ CONSTRAINT CK_TGT_TO_GET CHECK(TGT_TO_GET != 0));

```
MariaDB [info]> CREATE TABLE SALESMAN_MASTER2(
    -> SALESMAN_NO VARCHAR(6) PRIMARY KEY,
    -> SALESMAN_NAME VARCHAR(20) NOT NULL,
    -> ADDRESS1 VARCHAR(30) NOT NULL,
    -> ADDRESS2 VARCHAR(30),
    -> CITY VARCHAR(20),
    -> PINCODE INT(8),
    -> STATE VARCHAR(20),
    -> SAL_AMT FLOAT(8,2) NOT NULL,
    -> TGT_TO_GET FLOAT(6,2) NOT NULL,
    -> YTD_SALES FLOAT(6,2) NOT NULL,
    -> REMARKS VARCHAR(60),
    -> CONSTRAINT CK_SALESMAN_NO CHECK(SALESMAN_NO LIKE "S%"),
    -> CONSTRAINT CK_SAL_AMT CHECK(SAL_AMT != 0),
    -> CONSTRAINT CK_TGT_TO_GET CHECK(TGT_TO_GET != 0));
Query OK, 0 rows affected (0.014 sec)
```

Schema of the Table:

Commands used:

→ DESCRIBE SALESMAN_MASTER2 or DESC SALESMAN_MASTER2;

```
MariaDB [info]> DESC SALESMAN_MASTER2;
+---------------+-------------+------+-----+---------+-------+
| Field         | Type        | Null | Key | Default | Extra |
+---------------+-------------+------+-----+---------+-------+
| SALESMAN_NO   | varchar(6)  | NO   | PRI | NULL    |       |
| SALESMAN_NAME | varchar(20) | NO   |     | NULL    |       |
| ADDRESS1      | varchar(30) | NO   |     | NULL    |       |
| ADDRESS2      | varchar(30) | YES  |     | NULL    |       |
| CITY          | varchar(20) | YES  |     | NULL    |       |
| PINCODE       | int(8)      | YES  |     | NULL    |       |
| STATE         | varchar(20) | YES  |     | NULL    |       |
| SAL_AMT       | float(8,2)  | NO   |     | NULL    |       |
| TGT_TO_GET    | float(6,2)  | NO   |     | NULL    |       |
| YTD_SALES     | float(6,2)  | NO   |     | NULL    |       |
| REMARKS       | varchar(60) | YES  |     | NULL    |       |
+---------------+-------------+------+-----+---------+-------+
11 rows in set (0.026 sec)
```

4) Creation of Table:

  1) **Table Name:** SALES_ORDER
  2) **Description:** Used to store Sales Order Information

Commands for Creating Table:

  → CREATE TABLE SALES_ORDER(
  → ORDER_NO CHAR(6) PRIMARY KEY,
  → CLIENT_NO CHAR(6)REFERENCES CLIENT_MASTER2,
  → ORDERDATE DATE,
  → SALESMAN_NO CHAR(6) REFERENCES SALESMAN_MASTER2,
  → DELIVTYPE CHAR(1) DEFAULT 'F',
  → BILLYN CHAR(1),
  → DELIVDATE DATE,
  → ORDERSTATUS VARCHAR(10),
  → CONSTRAINT CK_DELIVTYPE CHECK(DELIVTYPE IN('P','F')),
  → CONSTRAINT CK_DELIVDATE CHECK(DELIVDATE>ORDERDATE),
  → CONSTRAINT CK_ORDERSTATUS CHECK(ORDERSTATUS IN('In Process','Fulfilled','Backorder','Cancelled')));

```
MariaDB [info]> CREATE TABLE SALES_ORDER(
    -> ORDER_NO CHAR(6) PRIMARY KEY,
    -> CLIENT_NO CHAR(6)REFERENCES CLIENT_MASTER2,
    -> ORDERDATE DATE,
    -> SALESMAN_NO CHAR(6) REFERENCES SALESMAN_MASTER2,
    -> DELIVTYPE CHAR(1) DEFAULT 'F',
    -> BILLYN CHAR(1),
    -> DELIVDATE DATE,
    -> ORDERSTATUS VARCHAR(10),
    -> CONSTRAINT CK_DELIVTYPE CHECK(DELIVTYPE IN('P','F')),
    -> CONSTRAINT CK_DELIVDATE CHECK(DELIVDATE>ORDERDATE),
    -> CONSTRAINT CK_ORDERSTATUS CHECK(ORDERSTATUS IN('In Process','Fulfilled','Backorder','Cancelled')));
Query OK, 0 rows affected (0.018 sec)
```

Describing Schema of the Table:

→ DESCRIBE SALES_ORDER or DESC SALES_ORDER;

```
MariaDB [info]> DESC SALES_ORDER;
+-------------+-------------+------+-----+---------+-------+
| Field       | Type        | Null | Key | Default | Extra |
+-------------+-------------+------+-----+---------+-------+
| ORDER_NO    | char(6)     | NO   | PRI | NULL    |       |
| CLIENT_NO   | char(6)     | YES  | MUL | NULL    |       |
| ORDERDATE   | date        | YES  |     | NULL    |       |
| SALESMAN_NO | char(6)     | YES  | MUL | NULL    |       |
| DELIVTYPE   | char(1)     | YES  |     | F       |       |
| BILLYN      | char(1)     | YES  |     | NULL    |       |
| DELIVDATE   | date        | YES  |     | NULL    |       |
| ORDERSTATUS | varchar(10) | YES  |     | NULL    |       |
+-------------+-------------+------+-----+---------+-------+
8 rows in set (0.011 sec)
```

5) Creation of Table:

1) **Table Name:** SALES_ORDER_DETAILS
2) **Description:** Used to store Client's Orders with details of each product.

Commands for Creating Table:

→ CREATE TABLE SALES_ORDER_DETAILS(
→ ORDER_NO CHAR(6) REFERENCES SALES_ORDER,
→ PRODUCT_NO CHAR(6) REFERENCES PRODUCT_MASTER2,
→ QTY_ORDERED INT,
→ QTY_DISP INT,
→ PRODUCT_RATE FLOAT(10,2));

```
MariaDB [info]> CREATE TABLE SALES_ORDER_DETAILS(
    -> ORDER_NO CHAR(6) REFERENCES SALES_ORDER,
    -> PRODUCT_NO CHAR(6) REFERENCES PRODUCT_MASTER2,
    -> QTY_ORDERED INT,
    -> QTY_DISP INT,
    -> PRODUCT_RATE FLOAT(10,2));
Query OK, 0 rows affected (0.015 sec)
```

Describing Schema of the Table:

Commands used:

→ DESCRIBE SALES_ORDER_DETAILS or DESC SALES_ORDER_DETAILS;

```
MariaDB [info]> DESC SALES_ORDER_DETAILS;
+--------------+-------------+------+-----+---------+-------+
| Field        | Type        | Null | Key | Default | Extra |
+--------------+-------------+------+-----+---------+-------+
| ORDER_NO     | char(6)     | YES  | MUL | NULL    |       |
| PRODUCT_NO   | char(6)     | YES  | MUL | NULL    |       |
| QTY_ORDERED  | int(11)     | YES  |     | NULL    |       |
| QTY_DISP     | int(11)     | YES  |     | NULL    |       |
| PRODUCT_RATE | float(10,2) | YES  |     | NULL    |       |
+--------------+-------------+------+-----+---------+-------+
5 rows in set (0.016 sec)
```