Name: Sarthak Jain

Programme: B.Tech CSE Al&ML (Batch 5)

Course: Advanced Database Management Systems Lab

#### **PRACTICAL 1**

Title: To understand DDL and DML commands

Objective: To understand the concept of designing issue related to the database with creating, populating the tables. Also familiarize students with different ways of manipulation in database.

#### 1. Create the tables described below:

1.A. Table name: CLIENT\_MASTER

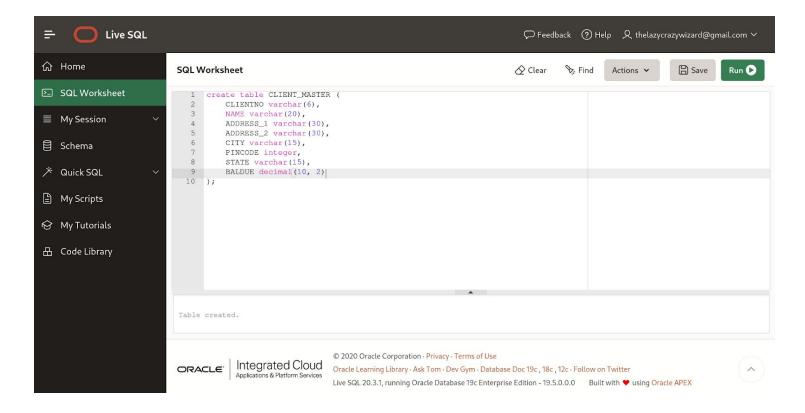
Description: used to store client information

| Column Name | Data type | Size  |  |
|-------------|-----------|-------|--|
| CLIENTNO    | varchar   | 6     |  |
| NAME        | varchar   | 20    |  |
| ADDRESS_1   | varchar   | 30    |  |
| ADDRESS_2   | varchar   | 30    |  |
| CITY        | varchar   | 15    |  |
| PINCODE     | integer   | -     |  |
| STATE       | varchar   | 15    |  |
| BALDUE      | decimal   | 10, 2 |  |

#### 1.A (solution):

```
create table CLIENT_MASTER (
CLIENTNO varchar(6),
NAME varchar(20),
ADDRESS_1 varchar(30),
ADDRESS_2 varchar(30),
CITY varchar(15),
PINCODE integer,
STATE varchar(15),
BALDUE decimal(10, 2)
);
```

#### 1.A (solution):



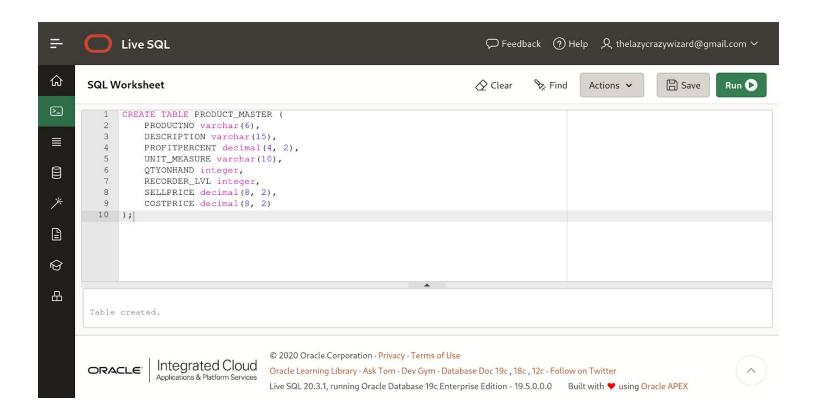
# 1.B. Table Name: PRODUCT\_MASTER

Description: used to store product information

| Column Name   | Data Type | Size |
|---------------|-----------|------|
| PRODUCTNO     | varchar   | 6    |
| DESCRIPTION   | varchar   | 15   |
| PROFITPERCENT | decimal   | 4,2  |
| UNIT_MEASURE  | varchar   | 10   |
| QTYONHAND     | integer   | -    |
| REORDER_VL    | integer   | -    |
| SELLPRICE     | decimal   | 8,2  |
| COSTPRICE     | decimal   | 8,2  |

#### 1.B.(solution)

```
CREATE TABLE PRODUCT_MASTER (
PRODUCTNO varchar(6),
DESCRIPTION varchar(15),
PROFITPERCENT decimal(4, 2),
UNIT_MEASURE varchar(10),
QTYONHAND integer,
RECORDER_LVL integer,
SELLPRICE decimal(8, 2),
COSTPRICE decimal(8, 2)
);
```



### 1.C. Table Name: SALESMAN\_MASTER

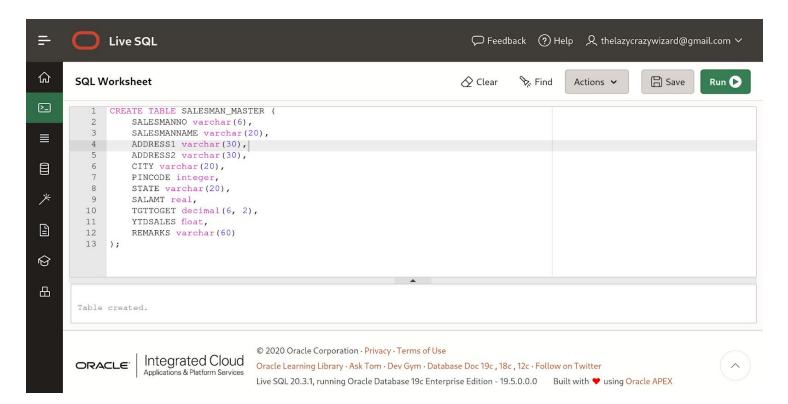
Description: Used to store salesman information working for the company.

| Column Name  | Data type | Size |
|--------------|-----------|------|
| SALESMANNO   | varchar   | 6    |
| SALESMANNAME | varchar   | 20   |
| ADDRESS_1    | varchar   | 30   |
| ADDRESS_2    | varchar   | 30   |
| CITY         | varchar   | 20   |

| PINCODE  | integer | -   |
|----------|---------|-----|
| STATE    | varchar | 20  |
| SALAMT   | real    | -   |
| TGTTOGET | decimal | -   |
| YTDSALES | double  | 6,2 |
| REMARKS  | varchar | 60  |

#### 1.C.(solution)

```
CREATE TABLE SALESMAN_MASTER (
SALESMANNO varchar(6),
SALESMANNAME varchar(20),
ADDRESS1 varchar(30),
CITY varchar(20),
PINCODE integer,
STATE varchar(20),
SALAMT real,
TGTTOGET decimal(6, 2),
YTDSALES float,
REMARKS varchar(60)
);
```



# 2. Insert the following data into their respective tables:

### 2.A. Data for CLIENT\_MASTER table:

| Client No | Name           | City      | Pincode | State       | BalDue |
|-----------|----------------|-----------|---------|-------------|--------|
| C00001    | Ivan bayross   | Mumbai    | 400054  | Maharashtra | 15000  |
| C00002    | Mamta Muzumdar | Madras    | 780001  | Tamil Nadu  | 0      |
| C00003    | Chhaya bankar  | Mumbai    | 400057  | Maharashtra | 5000   |
| C00004    | Ashwini Joshi  | Bangalore | 560001  | Karnataka   | 0      |
| C00005    | Hansel Colaco  | Mumbai    | 400060  | Maharashtra | 2000   |
| C00006    | Deepak Sharma  | Mangalore | 560050  | Karnataka   | 0      |

#### 2.A.(solution)

INSERT INTO CLIENT\_MASTER (CLIENTNO, NAME, CITY, PINCODE, STATE, BALDUE) VALUES ('COOOO1', 'Ivan Bayross', 'Mumbai', 400054, 'Maharashtra', 15000);

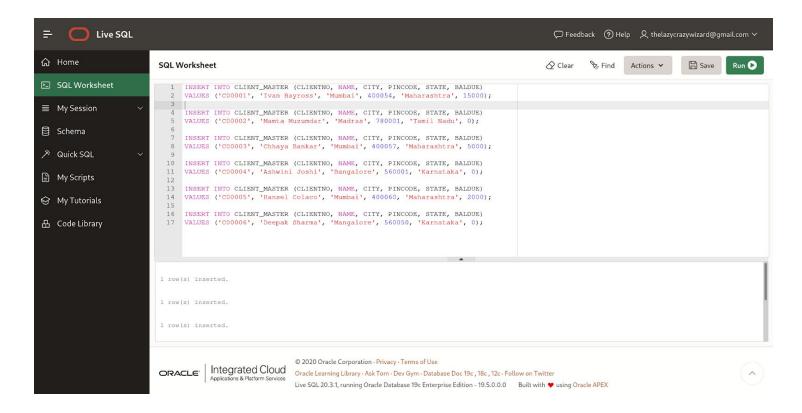
INSERT INTO CLIENT\_MASTER (CLIENTNO, NAME, CITY, PINCODE, STATE, BALDUE) VALUES ('CO0002', 'Mamta Muzumdar', 'Madras', 780001, 'Tamil Nadu', 0);

INSERT INTO CLIENT\_MASTER (CLIENTNO, NAME, CITY, PINCODE, STATE, BALDUE) VALUES ('COOO03', 'Chhaya Bankar', 'Mumbai', 400057, 'Maharashtra', 5000);

INSERT INTO CLIENT\_MASTER (CLIENTNO, NAME, CITY, PINCODE, STATE, BALDUE) VALUES ('C00004', 'Ashwini Joshi', 'Bangalore', 560001, 'Karnataka', 0);

INSERT INTO CLIENT\_MASTER (CLIENTNO, NAME, CITY, PINCODE, STATE, BALDUE) VALUES ('CO0005', 'Hansel Colaco', 'Mumbai', 400060, 'Maharashtra', 2000);

INSERT INTO CLIENT\_MASTER (CLIENTNO, NAME, CITY, PINCODE, STATE, BALDUE) VALUES ('C00006', 'Deepak Sharma', 'Mangalore', 560050, 'Karnataka', 0);



# 2.B. Data for PRODUCT\_MASTER table:

| Product<br>No | Description  | Profit<br>percent | Unit Measure | Quantity on<br>hand | Recorder<br>Level | Sell Price | Cost<br>Price |
|---------------|--------------|-------------------|--------------|---------------------|-------------------|------------|---------------|
| P00001        | T-shirt      | 5                 | Piece        | 200                 | 50                | 350        | 250           |
| P0345         | Shirts       | 6                 | Piece        | 150                 | 50                | 500        | 350           |
| P06734        | Cotton Jeans | 5                 | Piece        | 100                 | 20                | 600        | 450           |
| P07865        | Jeans        | 5                 | Piece        | 100                 | 20                | 750        | 500           |
| P07868        | Trousers     | 2                 | Piece        | 150                 | 50                | 850        | 550           |
| P07885        | Pull Overs   | 2.5               | Piece        | 80                  | 30                | 700        | 450           |
| P07965        | Denim Jeans  | 4                 | Piece        | 100                 | 40                | 350        | 250           |
| P07975        | Lycra Tops   | 5                 | Piece        | 70                  | 30                | 300        | 175           |
| P08865        | Skirts       | 5                 | Piece        | 75                  | 30                | 450        | 300           |

#### 2.B.(solution)

INSERT INTO PRODUCT\_MASTER (PRODUCTNO, DESCRIPTION, PROFITPERCENT, UNIT\_MEASURE, QTYONHAND, RECORDER\_LVL, SELLPRICE, COSTPRICE)

VALUES ('P00001', 'T-Shirt', 5, 'Piece', 200, 50, 350, 250);

INSERT INTO PRODUCT\_MASTER (PRODUCTNO, DESCRIPTION, PROFITPERCENT, UNIT\_MEASURE, QTYONHAND, RECORDER\_LVL, SELLPRICE, COSTPRICE)

VALUES ('PO435', 'Shirts', 6, 'Piece', 150, 50, 500, 350);

INSERT INTO PRODUCT\_MASTER (PRODUCTNO, DESCRIPTION, PROFITPERCENT, UNIT\_MEASURE, QTYONHAND, RECORDER\_LVL, SELLPRICE, COSTPRICE)

VALUES ('P06734', 'Cotton Jeans', 5, 'Piece', 100, 20, 600, 450);

INSERT INTO PRODUCT\_MASTER (PRODUCTNO, DESCRIPTION, PROFITPERCENT, UNIT\_MEASURE, QTYONHAND, RECORDER\_LVL, SELLPRICE, COSTPRICE)

VALUES ('P07865', 'Jeans', 5, 'Piece', 100, 20, 750, 500);

INSERT INTO PRODUCT\_MASTER (PRODUCTNO, DESCRIPTION, PROFITPERCENT, UNIT\_MEASURE, QTYONHAND, RECORDER\_LVL, SELLPRICE, COSTPRICE)

VALUES ('P07868', 'Trousers', 2, 'Piece', 150, 50, 850, 550);

INSERT INTO PRODUCT\_MASTER (PRODUCTNO, DESCRIPTION, PROFITPERCENT, UNIT\_MEASURE, QTYONHAND, RECORDER LVL, SELLPRICE, COSTPRICE)

VALUES ('P07885', 'Pull Overs', 2.5, 'Piece', 80, 30, 700, 450);

INSERT INTO PRODUCT\_MASTER (PRODUCTNO, DESCRIPTION, PROFITPERCENT, UNIT\_MEASURE, QTYONHAND, RECORDER\_LVL, SELLPRICE, COSTPRICE)

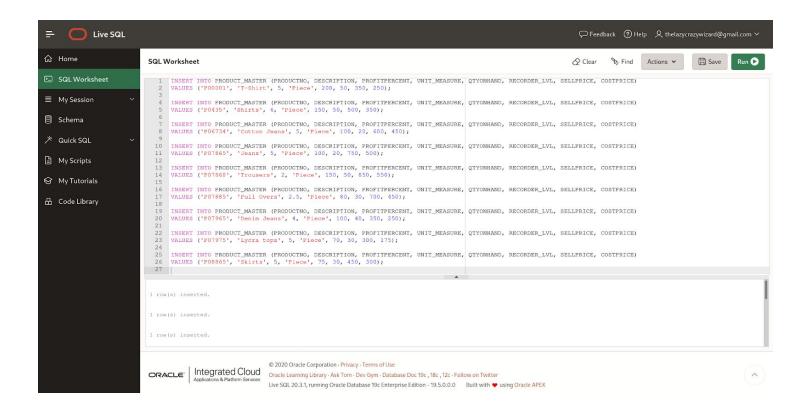
VALUES ('P07965', 'Denim Jeans', 4, 'Piece', 100, 40, 350, 250);

INSERT INTO PRODUCT\_MASTER (PRODUCTNO, DESCRIPTION, PROFITPERCENT, UNIT\_MEASURE, QTYONHAND, RECORDER\_LVL, SELLPRICE, COSTPRICE)

VALUES ('P07975', 'Lycra tops', 5, 'Piece', 70, 30, 300, 175);

INSERT INTO PRODUCT\_MASTER (PRODUCTNO, DESCRIPTION, PROFITPERCENT, UNIT\_MEASURE, QTYONHAND, RECORDER\_LVL, SELLPRICE, COSTPRICE)

VALUES ('P08865', 'Skirts', 5, 'Piece', 75, 30, 450, 300);



#### 2.C. Data for SALESMAN\_MASTER table:

| Salesman<br>No | Name   | Address1 | Address2 | City   | PinCode | State       |
|----------------|--------|----------|----------|--------|---------|-------------|
| 500001         | Aman   | A/14     | Worli    | Mumbai | 400002  | Maharashtra |
| 500002         | Omkar  | 65       | Nariman  | Mumbai | 400001  | Maharashtra |
| 500003         | Raj    | P-7      | Bandra   | Mumbai | 400032  | Maharashtra |
| 500004         | Ashish | A/5      | Juhu     | Mumbai | 400044  | Maharashtra |

#### 2.C.(solution)

INSERT INTO SALESMAN\_MASTER (SALESMANNO, SALESMANNAME, ADDRESS1, ADDRESS2, CITY, PINCODE, STATE)

VALUES ('S00001', 'Aman', 'A/14', 'Worli', 'Mumbai', 400002, 'Maharashtra');

INSERT INTO SALESMAN\_MASTER (SALESMANNO, SALESMANNAME, ADDRESS1, ADDRESS2, CITY, PINCODE, STATE)

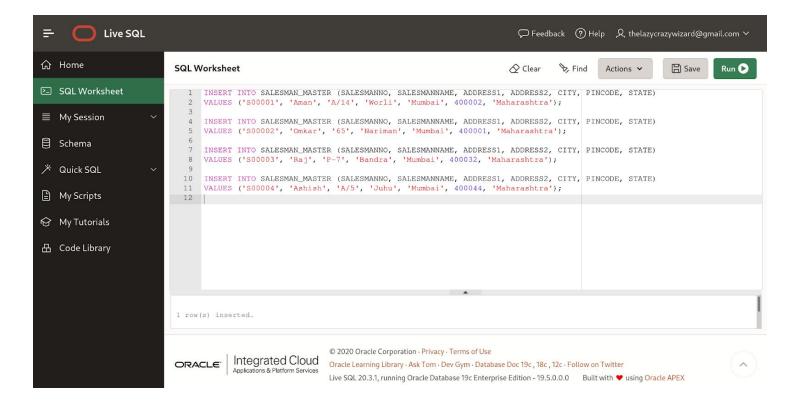
VALUES ('S00002', 'Omkar', '65', 'Nariman', 'Mumbai', 400001, 'Maharashtra');

INSERT INTO SALESMAN\_MASTER (SALESMANNO, SALESMANNAME, ADDRESS1, ADDRESS2, CITY, PINCODE, STATE)

VALUES ('S00003', 'Raj', 'P-7', 'Bandra', 'Mumbai', 400032, 'Maharashtra');

INSERT INTO SALESMAN\_MASTER (SALESMANNO, SALESMANNAME, ADDRESS1, ADDRESS2, CITY, PINCODE, STATE)

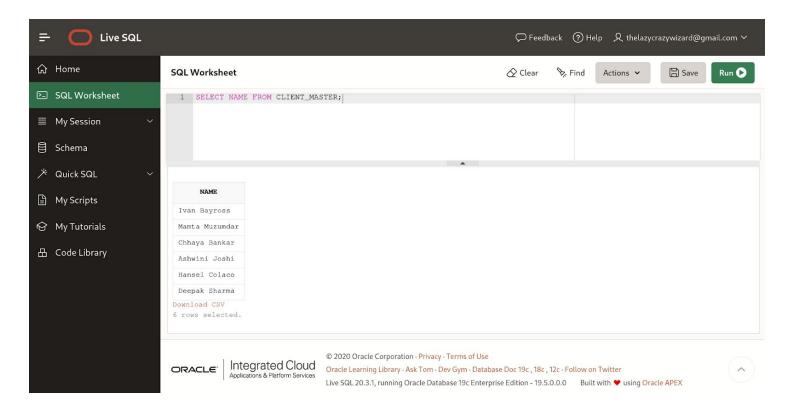
VALUES ('S00004', 'Ashish', 'A/5', 'Juhu', 'Mumbai', 400044, 'Maharashtra');



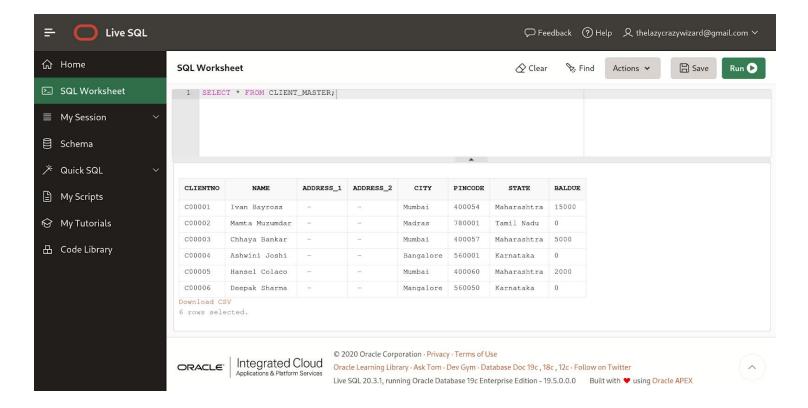
### 3. Exercise on retrieving records from a table.

3.A. Find out the names of all the clients.

3.A.(solution)
SELECT NAME FROM CLIENT\_MASTER;



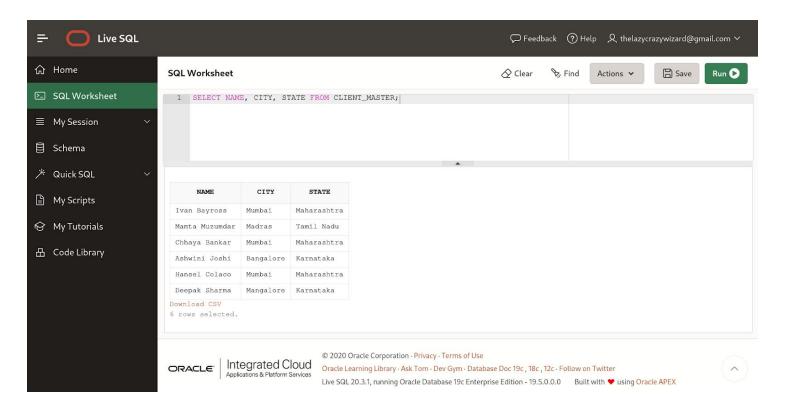
- 3.B. Retrieve the entire contents of the Client\_Master table.
- 3.B.(solution): SELECT \* FROM CLIENT\_MASTER;



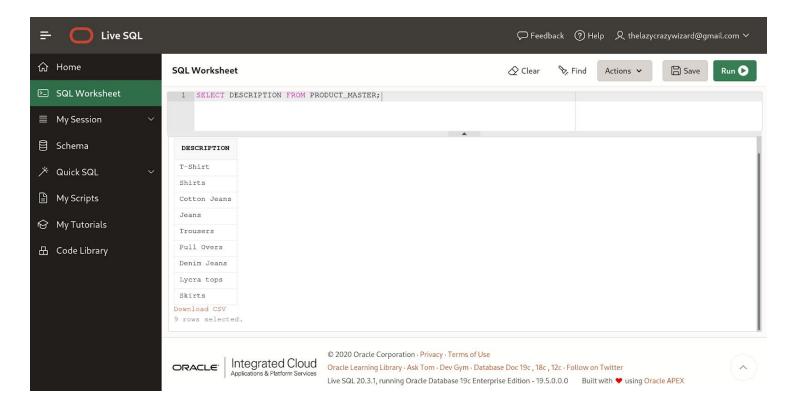
3.C. Retrieve the list of names, city and the state of all the clients.

#### 3.C.(solution)

### SELECT NAME, CITY, STATE FROM CLIENT\_MASTER;

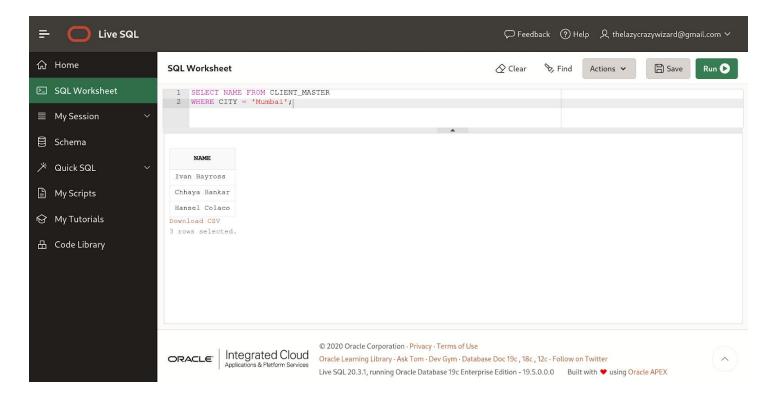


- 3.D. List the various products available from the Product\_Master table.
- 3.D.(solution): SELECT DESCRIPTION FROM PRODUCT\_MASTER;



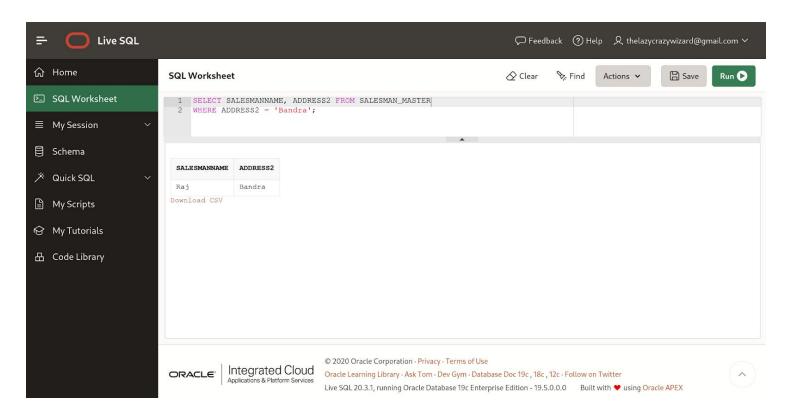
3.E. List all the clients who are located in Mumbai.

# 3.E.(solution) SELECT NAME FROM CLIENT\_MASTER WHERE CITY = 'Mumbai';



3.F. Find the names of salesman who have lives in Bandra.

# 3.F.(solution) SELECT SALESMANNAME, ADDRESS2 FROM SALESMAN\_MASTER WHERE ADDRESS2 = 'Bandra';



# 4. Exercise on updating records in a table

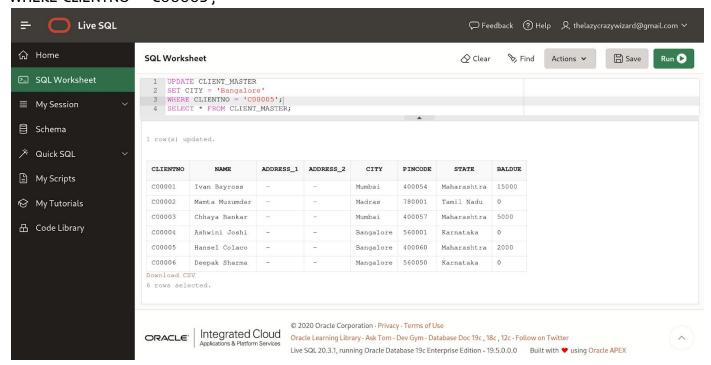
4.A. Change the city of ClientNo 'C00005' to 'Bangalore'.

4.A.(solution)

UPDATE CLIENT\_MASTER

SET CITY = 'Bangalore'

WHERE CLIENTNO = 'C00005';



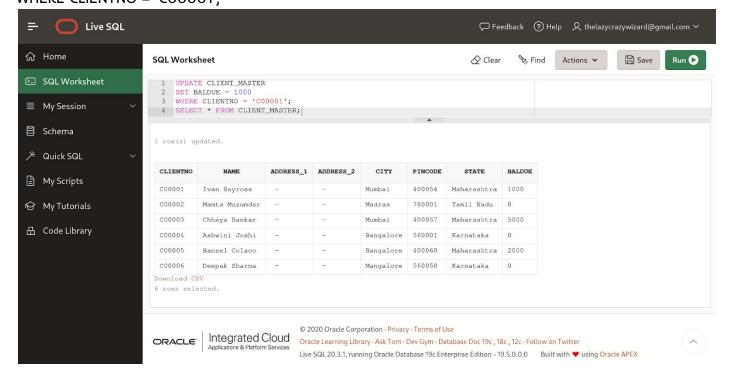
4.B. Change the BalDue of ClientNo 'C00001' to Rs.1000.

4.B.(solution)

UPDATE CLIENT\_MASTER

SET BALDUE = 1000

WHERE CLIENTNO = 'C00001':



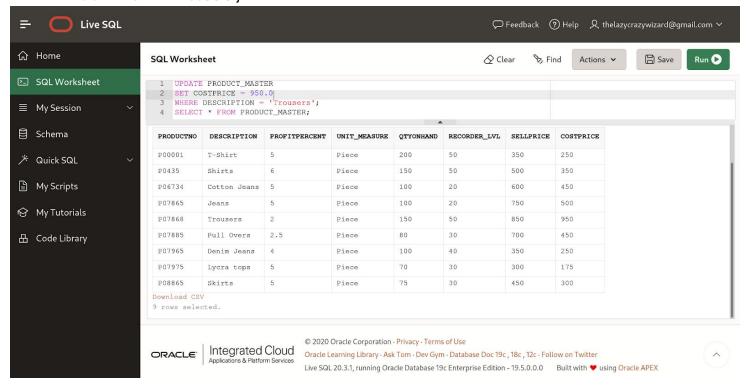
4.C. Change the cost price of 'Trousers' to rs.950.00.

4.C.(solution)

UPDATE PRODUCT\_MASTER

SET COSTPRICE = 950.0

WHERE DESCRIPTION = 'Trousers';

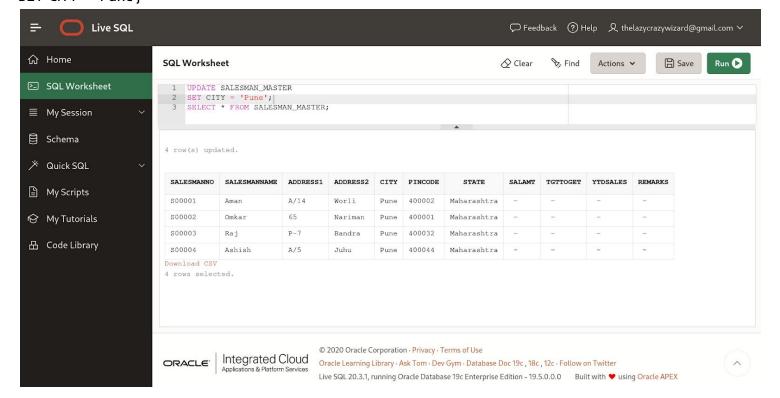


4.D. Change the city of the salesman to Pune.

4.D.(solution)

UPDATE SALESMAN\_MASTER

SET CITY = 'Pune';



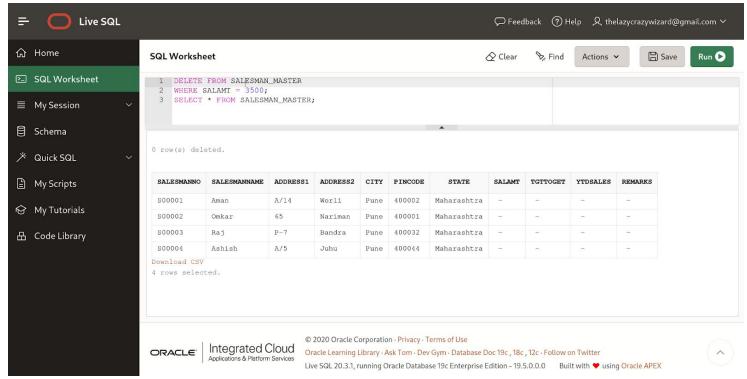
#### 5. Exercise on deleting records in a table

5.A. Delete all salesman from the Salesman\_Master whose salaries are equal to Rs.3500.

#### 5.A.(solution)

DELETE FROM SALESMAN\_MASTER

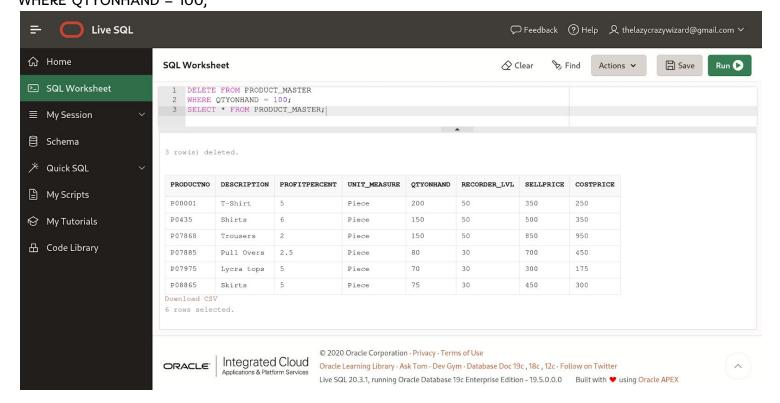
WHERE SALAMT = 3500; --(SALAMT typo for SALARY)



5.B. Delete all products from Product\_Master where the quantity on hand is equal to 100.

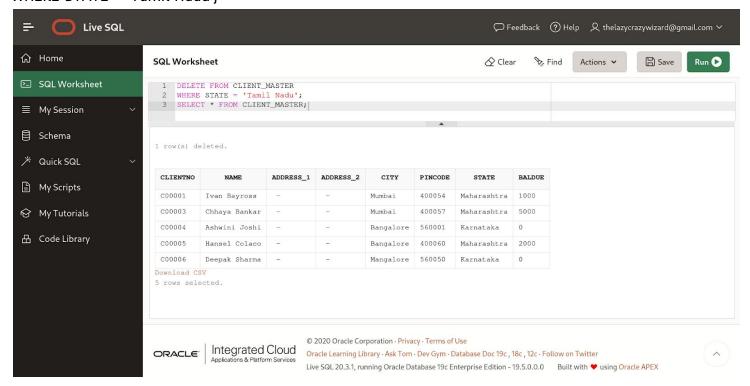
#### 5.B.(solution)

DELETE FROM PRODUCT\_MASTER WHERE QTYONHAND = 100;



5.C. Delete from Client Master where the column state holds the value 'Tamil Nadu'.

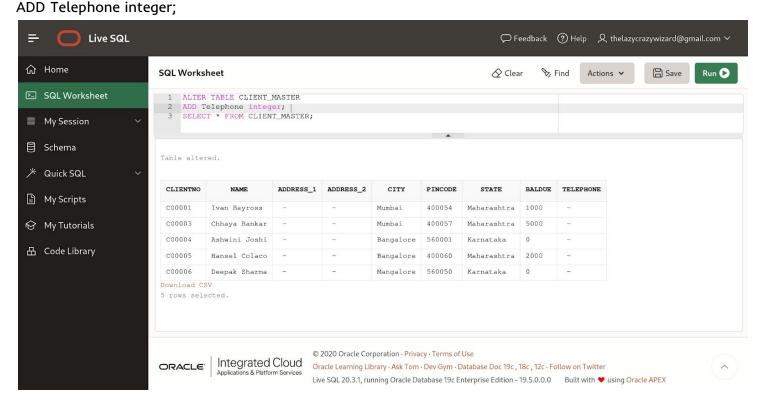
# 5.C.(solution) DELETE FROM CLIENT\_MASTER WHERE STATE = 'Tamil Nadu';



#### 6. Exercise on altering the table structure

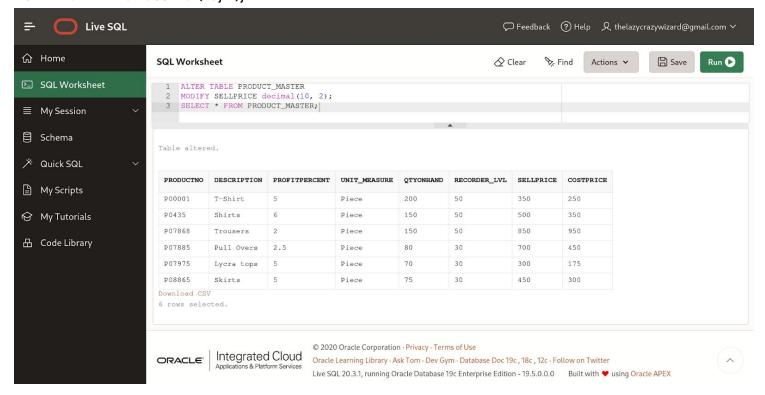
6.A. Add a column called 'Telephone' of data type integer to the Client\_Master table.

# 6.A.(solution) ALTER TABLE CLIENT\_MASTER



#### 6.B. Change the size off SellPrice column in Product \_Master to 10, 2.

# 6.B.(solution) ALTER TABLE PRODUCT\_MASTER MODIFY SELLPRICE decimal(10, 2);

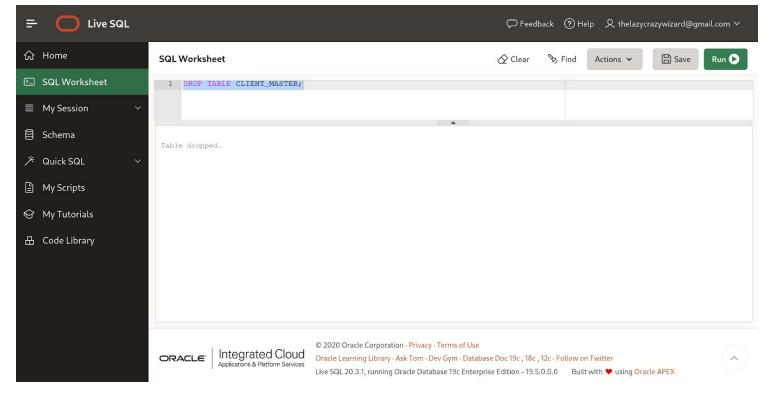


#### 7. Exercise on deleting the table structure along with the data

7.A.Destroy the table Client\_Master along with its data.

#### 7.A.(solution)

DROP TABLE CLIENT\_MASTER;



# 8. Exercise on renaming the table.

8.A. Change the name of the Salesman\_Master to sman\_mast.

8.A.(solution)
ALTER TABLE SALESMAN\_MASTER
RENAME TO SMAN\_MAST;
SELECT \* FROM SMAN\_MAST;

