# Assignment - SQL [Major] Name - Mohit Gupta

1. Create a table "Station" to store information about weather observation stations:

```
CREATE TABLE Station14 (

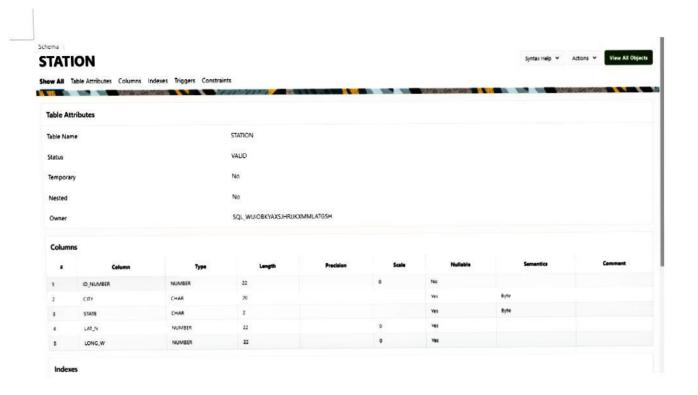
ID_Number INT PRIMARY KEY,

CITY CHAR(20),

STATE CHAR(2),

LAT_N NUMERIC,

LONG_W NUMERIC
);
```



# 2. Insert the following records into the table:

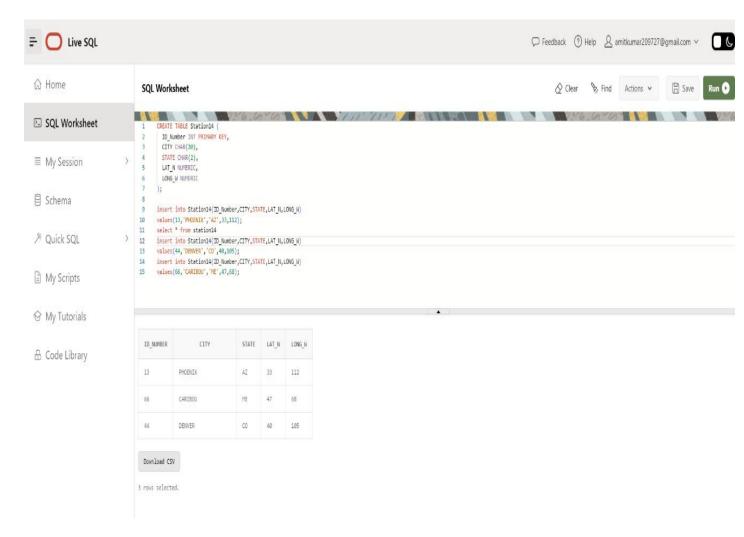
insert into Station14(ID\_Number,CITY,STATE,LAT\_N,LONG\_W)

values(13,'PHOENIX','AZ',33,112);

insert into Station14(ID\_Number,CITY,STATE,LAT\_N,LONG\_W)

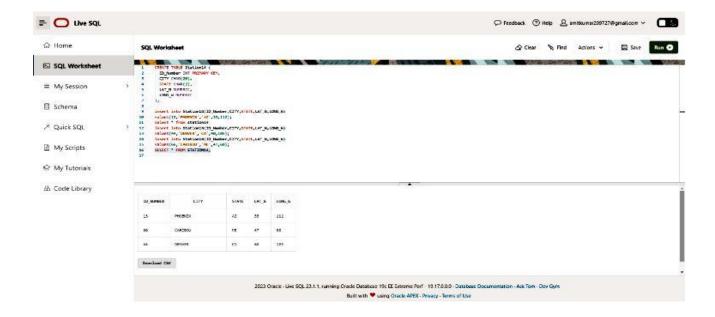
values(44, 'DENVER', 'CO', 40, 105);

insert into Station14(ID\_Number,CITY,STATE,LAT\_N,LONG\_W)



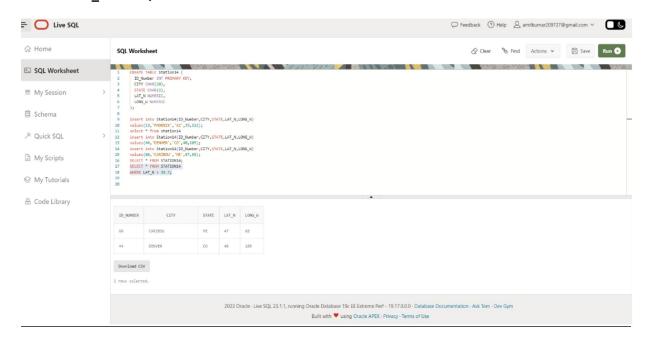
## 3. Execute a query to look at table STATION in undefined order

select \* from station14



4. Execute a query to select Northern stations (Northern latitude >39.7).

## WHERE LAT\_N > 39.7;



# 5. Create another table, 'STATS', to store normalized temperature and precipitation data:

```
CREATE TABLE STATS (

ID INT,

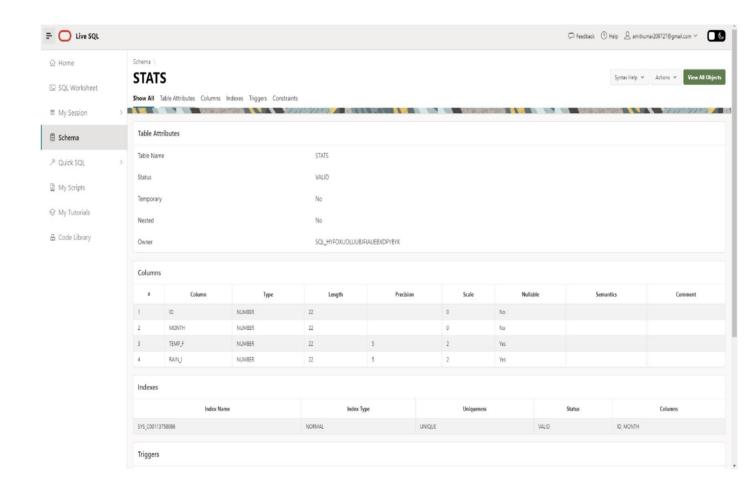
MONTH INT CHECK (MONTH BETWEEN 1 AND 12),

TEMP_F NUMERIC(5,2) CHECK (TEMP_F BETWEEN -80 AND 150),

RAIN_I NUMERIC(5,2) CHECK (RAIN_I BETWEEN 0 AND 100),

PRIMARY KEY (ID, MONTH)

);
```



## 6. Populate the table STATS with some statistics for January and July:

INSERT INTO STATS VALUES(13,1,57.4,.31);

INSERT INTO STATS VALUES(13,7,91.7,5.15);

INSERT INTO STATS VALUES(44,1,27.3,.18);

INSERT INTO STATS VALUES(44,7,74.8,2.11);

INSERT INTO STATS VALUES(66,1,6.7,2.1);

## INSERT INTO STATS VALUES(66,7,65.8,4.52);



# 7. Execute a query to display temperature stats (from STATS table) for each city (from Station table).

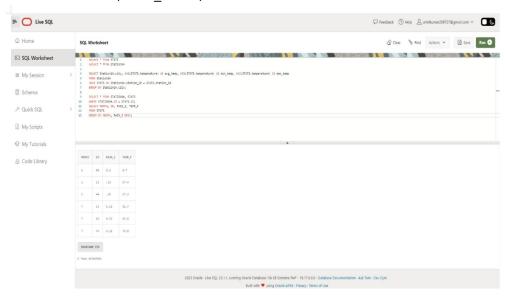
SELECT \* FROM STATION14, STATS

WHERE STATION14.ID = STATS.ID;

SELECT MONTH, ID, RAIN\_I, TEMP\_F

**FROM STATS** 

## ORDER BY MONTH, RAIN\_I DESC;

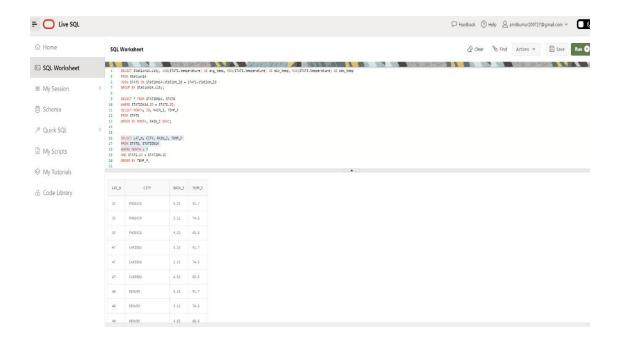


8. Execute a query to look at the table STATS, ordered by month and greatest rainfall, with columns rearranged. It should also show the corresponding cities.

SELECT LAT\_N, CITY, RAIN\_I, TEMP\_F

FROM STATS, STATION14

WHERE MONTH = 7

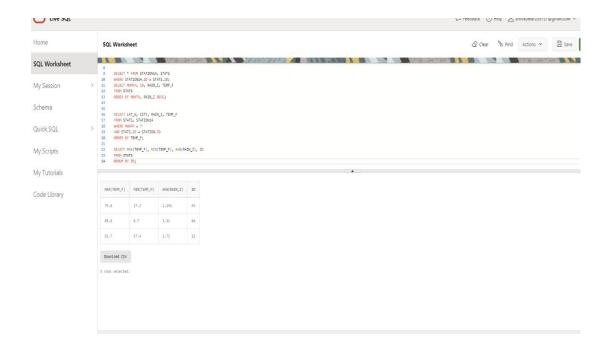


9. Execute a query to look at temperatures for July from table STATS, lowest temperatures first, picking up city name and latitude.

SELECT MAX(TEMP\_F), MIN(TEMP\_F), AVG(RAIN\_I), ID

**FROM STATS** 

GROUP BY ID;

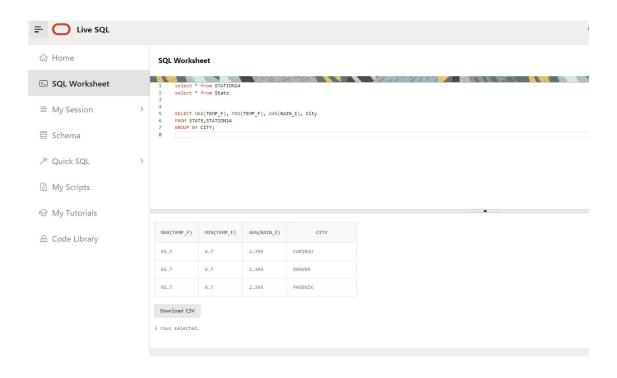


10. Execute a query to show MAX and MIN temperatures as well as average rainfall for each city

SELECT MAX(TEMP\_F), MIN(TEMP\_F), AVG(RAIN\_I), City

FROM STATS, STATION14

**GROUP BY CITY**;



# 11. Execute a query to display each city's monthly temperature in

Celcius and rainfall in Centimeter.

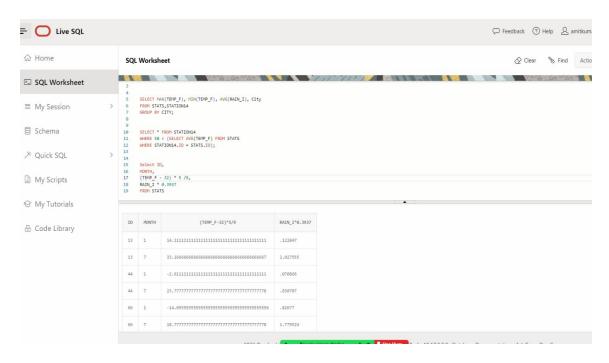
Select ID,

MONTH,

(TEMP\_F - 32) \* 5 /9,

# RAIN\_I \* 0.3937

## FROM STATS

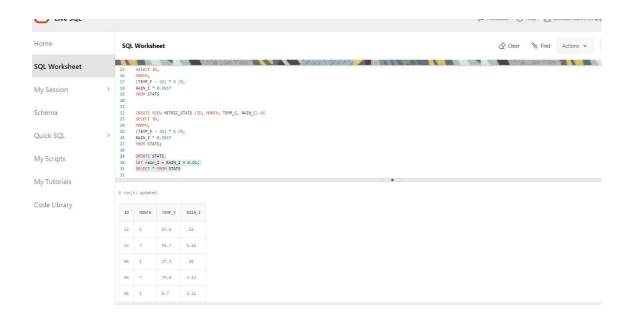


12. Update all rows of table STATS to compensate for faulty rain gauges known to read 0.01 inches low.

**UPDATE STATS** 

SET rain\_I = RAIN\_I + 0.01;

**SELECT \* FROM STATS** 



# 13. Update Denver's July temperature reading as 74.9

**UPDATE STATS** 

SET temp\_F = 74.9

WHERE month = 7

AND ID = 44;

## **SELECT \* FROM STATS**

