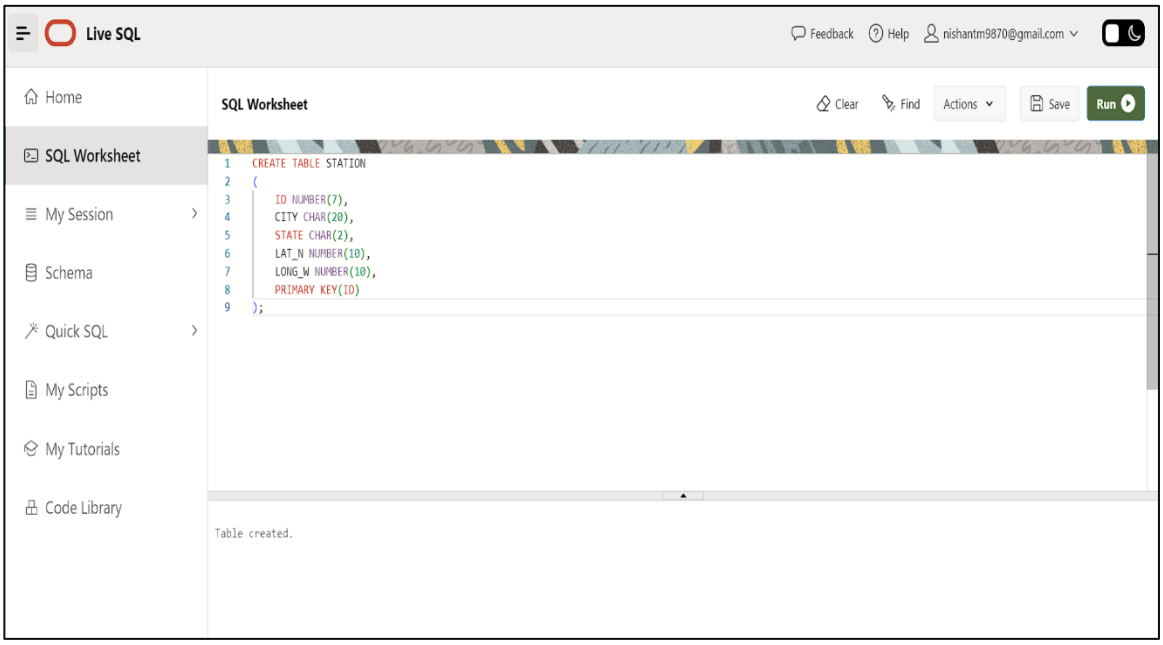
ASSIGNMENT

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

- CREATE TABLE STATION
  (
  ID NUMBER(7),
  CITY CHAR(20),
  STATE CHAR(2),
  LAT_N NUMBER(10),
  LONG _W NUMBER(10),
  PRIMARY KEY(ID)
  );

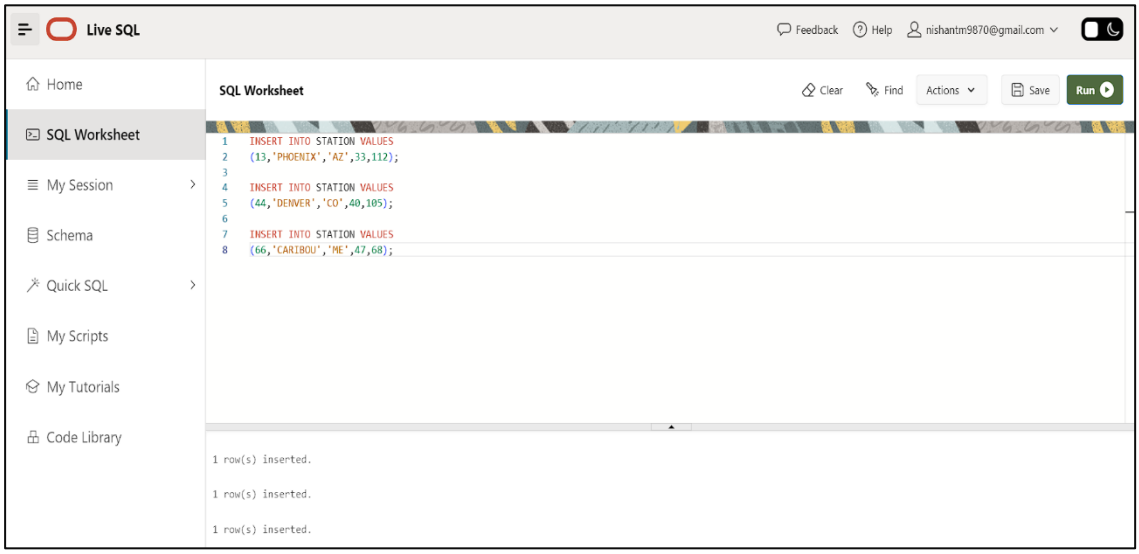
SCREENSHOT:



2. Insert the records into the table:

- INSERT INTO STATION VALUES
  (13, 'PHOENIX', 'AZ', 33, 112);
  INSERT INTO STATION VALUES
  (44, 'DENVER, 'CO, 40, 105);
  INSERT INTO STATION VALUES
  (66, 'CARIBOU', 'ME', 47, 68);

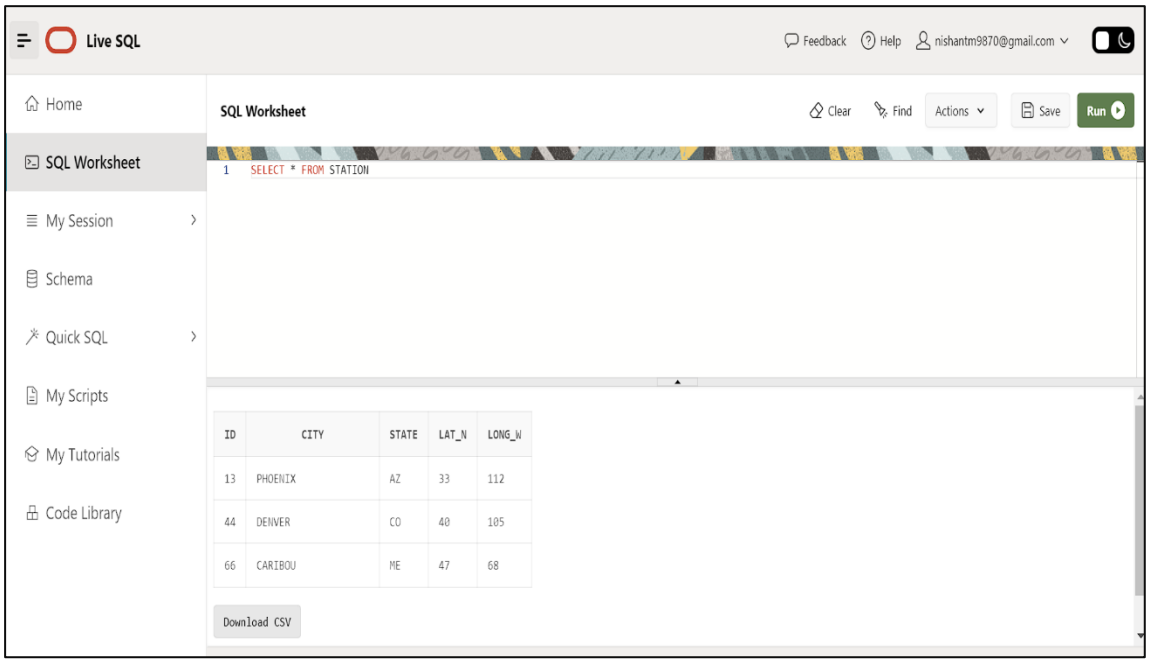
SCREENSHOT:



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

- SELECT * FROM STATION;

SCREENSHOT:



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

- SELECT * FROM STATION
  WHERE (LAT_N.39.7)
  ORDER BY LAT_N DESC;

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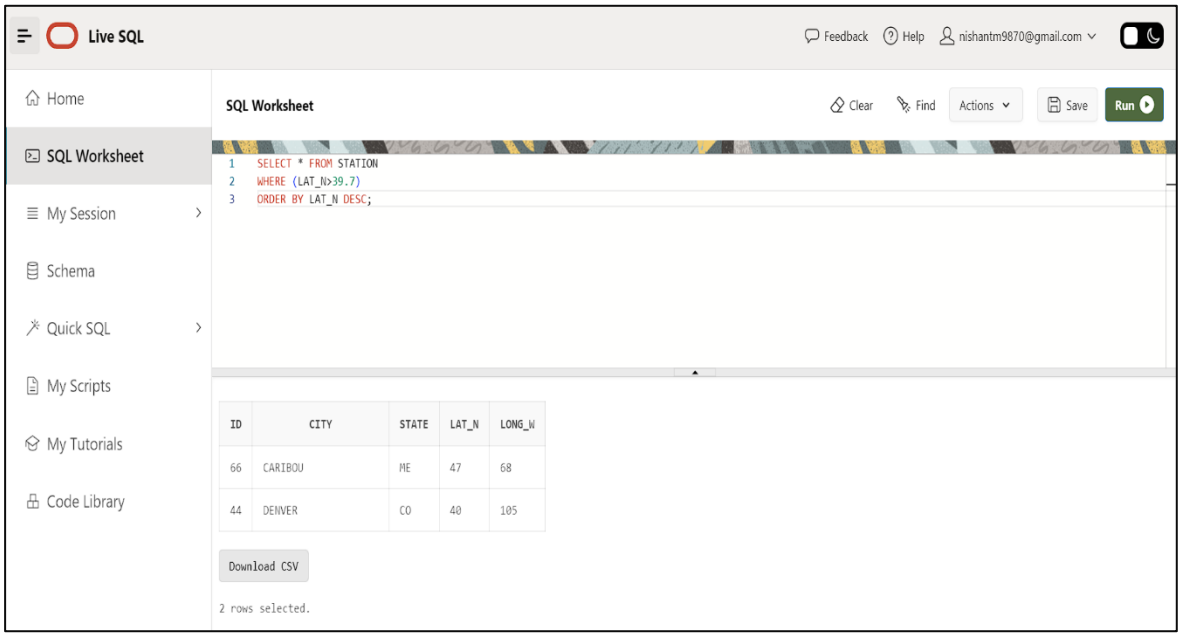
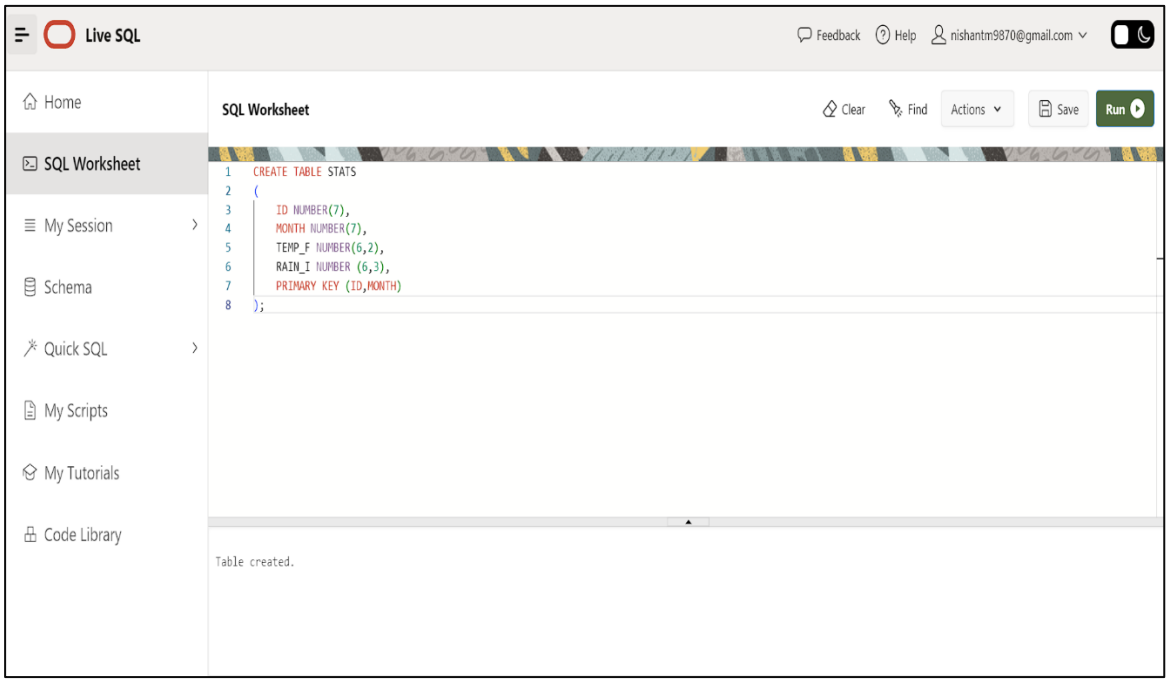


5. Create another table, 'STATS', to store normalized temperature and precipitation data:

- CREATE TABLE STATS
  (
  ID NUMBER(7),
  MONTH NUMBER(7),
  TEMP_F NUMBER(6,2),
  RAIN_I NUMBER (6,3),
  PRIMARY KEY (ID, MONTH)
  );

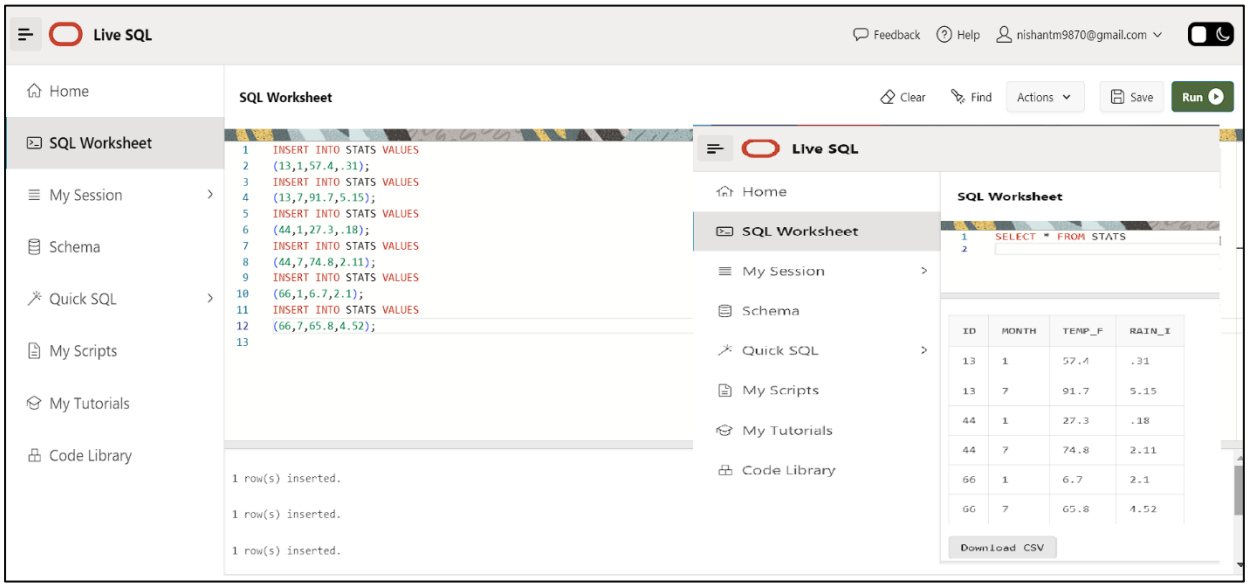
SCREENSHOT:



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);

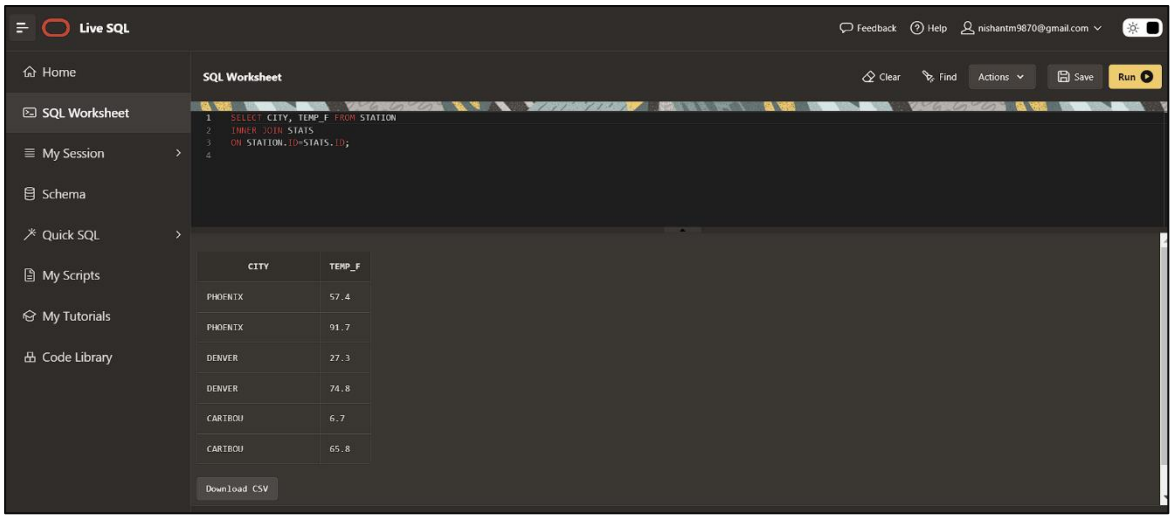
SCREENSHOT:



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

- SELECT CITY, TEMP_F FROM M STATION
  INNER JOIN STATS
  ON STATION.ID=STATS.ID;

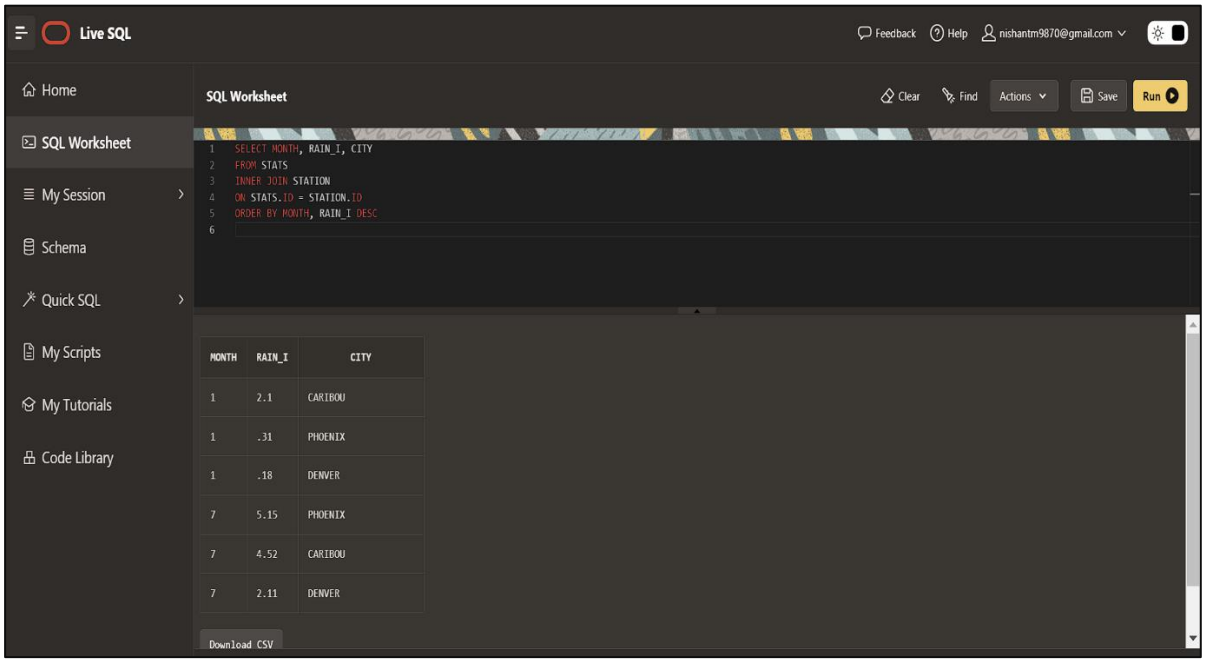
SCREENSHOT:



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 MONTH, RAIN_I, CITY
  FROM STATS
  INNER JOIN STATION
  ON STATS.ID = STATION.ID
  ORDER BY MONTH, RAIN_I DESC;

SCREENSHOT:



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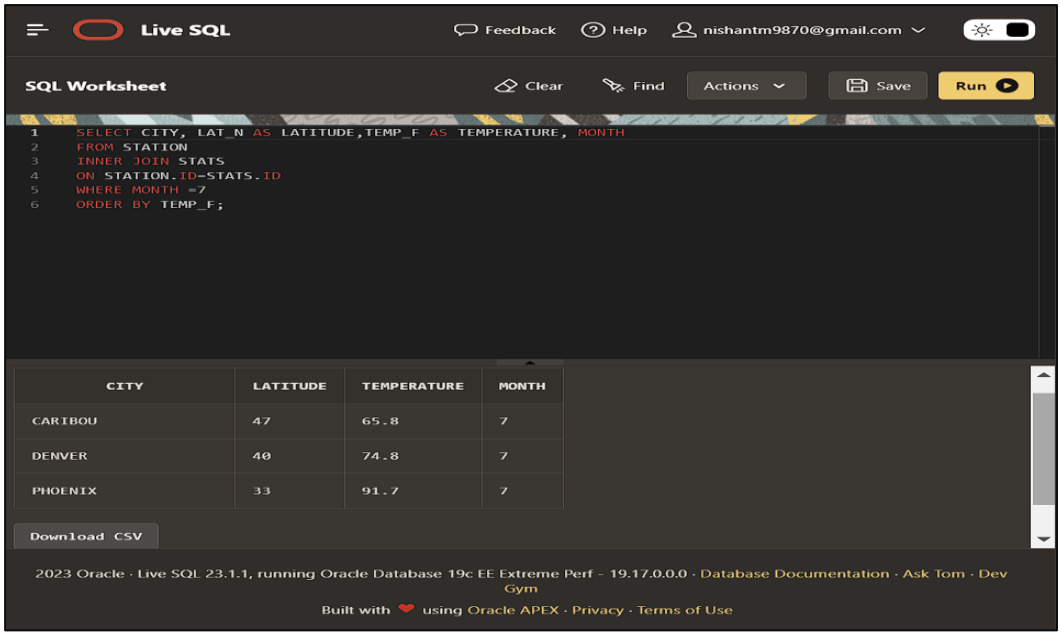
9. Execute a query to look at temperatures for July from table STATS, lowest temperatures first, picking up city name and latitude.

- **SELECT CITY, LAT_N AS LATITUDE, TEMP_F AS TEMPERATURE, MONTH, FROM STATION**
  INNER JOIN STATS
  ON STATION.ID = STATS.ID
  WHERE MONTH=7
  ORDER BY TEMP_F;

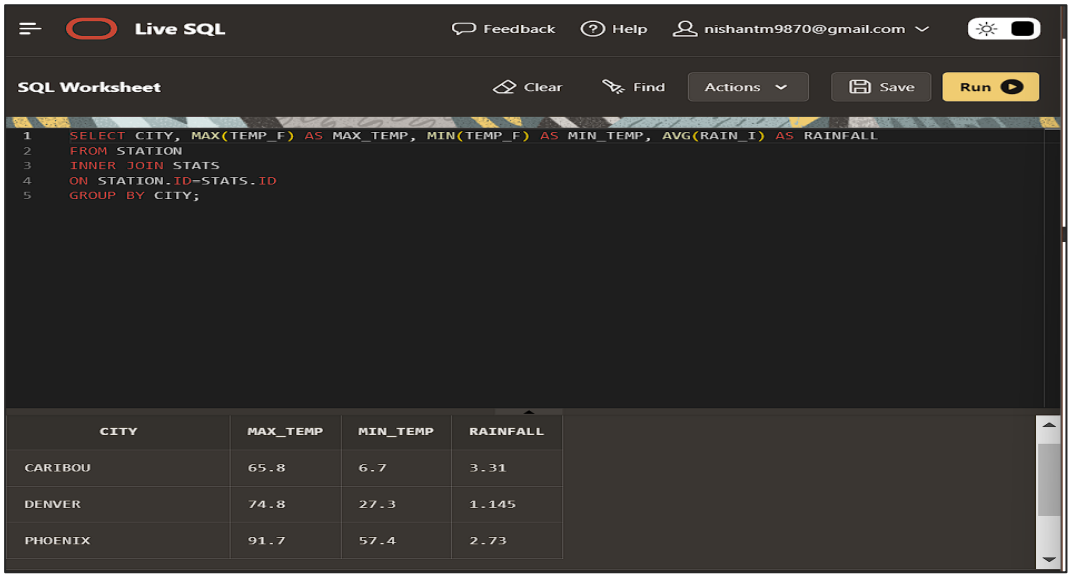
SCREENSHOT:



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

- SELECT CITY, MAX(TEMP_F) AS MAX_TEMP, MIN(TEMP_F) AS MIN_TEMP, AVG(RAIN_I) AS RAINFALL FROM STATION
  INNER JOIN STATS
  ON STATS.ID=STATS.ID
  GROUP BY CITY;

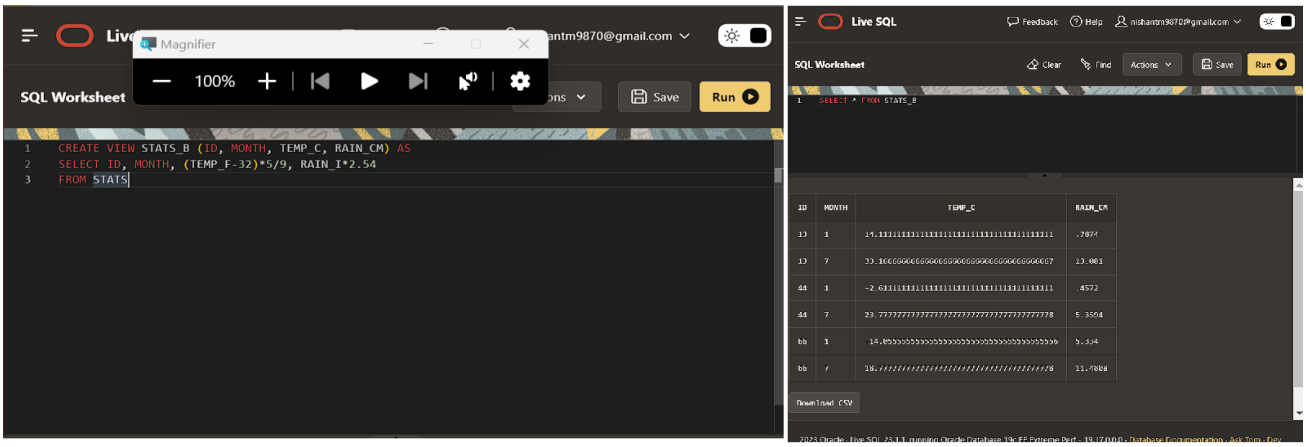
SCREENSHOT:



11. Execute a query to display each city's monthly Celcius temperature and Centimeter rainfall:

- CREATE VIEW STATS_B (ID, MONTH, TEMP_C, RAIN_CM) AS
  SELECT ID, MONTH, (TEMP_F-32)*5/9, RAIN_I*2.54
  FROM STATS;

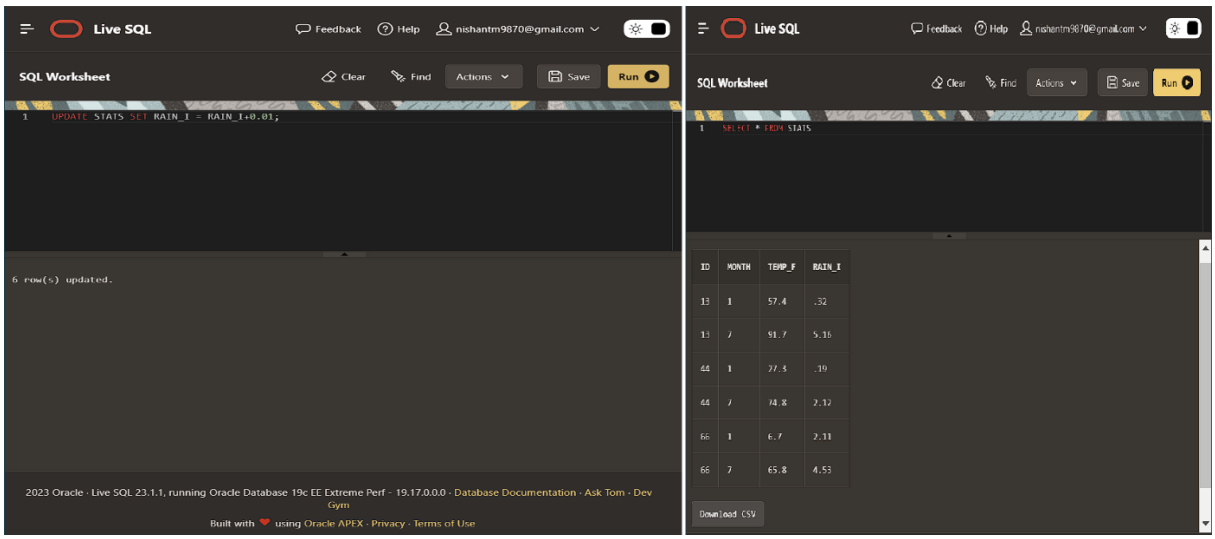
SCREENSHOT:



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;

SCREENSHOT:



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

- UPDATE STATS SET TEMP_F=74.9

  WHERE ID=44 AND MONTH=7;

SCREENSHOT: