

1.Create a table “Station” to store information about weather observation stations

ANS :

The screenshot shows the Oracle Live SQL interface. The SQL Worksheet contains the following code:

```
1 CREATE TABLE STATION
2 ( ID NUMBER PRIMARY KEY ,
3 CITY CHAR(20),
4 STATE CHAR(2),
5 LAT_N NUMBER,
6 LONG_W NUMBER )
```

Below the code, the output area displays "Table created." The interface includes a top navigation bar with "Live SQL" and a bottom status bar showing the date as 04-12-2022.

2.Insert the following records into the table :

ANS :

The screenshot shows the Oracle Live SQL interface with the same table definition as before. The SQL Worksheet now includes three INSERT statements:

```
1 CREATE TABLE STATION
2 ( ID NUMBER PRIMARY KEY ,
3 CITY CHAR(20),
4 STATE CHAR(2),
5 LAT_N NUMBER,
6 LONG_W NUMBER )
7
8 INSERT INTO STATION (ID,CITY,STATE,LAT_N, LONG_W) VALUES (13, 'PHOENIX', 'AZ', 33, 112);
9 INSERT INTO STATION (ID,CITY,STATE,LAT_N, LONG_W) VALUES (44, 'DENVER', 'CO', 40, 105);
10 INSERT INTO STATION (ID,CITY,STATE,LAT_N, LONG_W) VALUES (66, 'CARIBOU', 'ME', 47, 68);
```

The output area shows the results of the insertions:

```
1 row(s) inserted.
1 row(s) inserted.
1 row(s) inserted.
```

The interface includes a top navigation bar with "Live SQL" and a bottom status bar showing the date as 29-11-2022.

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

ANS :

The screenshot shows the Oracle Live SQL interface. The SQL Worksheet contains the following code:

```
1 CREATE TABLE STATION
2 ( ID NUMBER PRIMARY KEY ,
3 CITY CHAR(20),
4 STATE CHAR(2),
5 LAT_N NUMBER,
6 LONG_W NUMBER ) ;
7
8 INSERT INTO STATION (ID,CITY,STATE,LAT_N, LONG_W) VALUES (13,'PHOENIX','AZ',33,112);
9 INSERT INTO STATION (ID,CITY,STATE,LAT_N, LONG_W) VALUES (44,'DENVER','CO',40,105);
10 INSERT INTO STATION (ID,CITY,STATE,LAT_N, LONG_W) VALUES (66,'CARIBOU','ME',47,68);
11
12 SELECT * FROM STATION;
```

The query results are displayed in a table with 5 columns: ID, CITY, STATE, LAT_N, and LONG_W. The results show 3 rows selected.

ID	CITY	STATE	LAT_N	LONG_W
13	PHOENIX	AZ	33	112
44	DENVER	CO	40	105
66	CARIBOU	ME	47	68

Download CSV
3 rows selected.

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

ANS :

The screenshot shows the Oracle Live SQL interface. The SQL Worksheet contains the following code:

```
1 SELECT * FROM STATION
2 WHERE LAT_N > 39.7 ;
```

The query results are displayed in a table with 5 columns: ID, CITY, STATE, LAT_N, and LONG_W. The results show 2 rows selected.

ID	CITY	STATE	LAT_N	LONG_W
44	DENVER	CO	40	105
66	CARIBOU	ME	47	68

Download CSV
2 rows selected.

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

ANS :

The screenshot shows the Oracle Live SQL interface. The SQL Worksheet contains the following SQL code:

```
1 CREATE TABLE STATS
2 (
3   ID INT,
4   MONTH INT CHECK (MONTH BETWEEN 1 AND 12),
5   TEMP_F REAL CHECK (TEMP_F BETWEEN -80 AND 150),
6   RAIN_I REAL CHECK (RAIN_I BETWEEN 0 AND 100),
7   PRIMARY KEY (ID, MONTH));
```

Below the code, the message "Table created." is displayed. The interface includes a top navigation bar with "Live SQL" and a bottom status bar showing the date as 03-12-2022.

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

ANS :

The screenshot shows the Oracle Live SQL interface. The SQL Worksheet contains the following SQL code:

```
1 INSERT INTO STATS VALUES (13, 1, 57.4, 0.31);
2 INSERT INTO STATS VALUES (13, 7, 91.7, 5.15);
3 INSERT INTO STATS VALUES (44, 1, 27.3, 0.19);
4 INSERT INTO STATS VALUES (44, 7, 74.8, 2.11);
5 INSERT INTO STATS VALUES (66, 1, 6.7, 2.10);
6 INSERT INTO STATS VALUES (66, 7, 65.8, 4.52);
```

Below the code, the message "1 row(s) inserted." is displayed six times, indicating that all six rows were successfully inserted. The interface includes a top navigation bar with "Live SQL" and a bottom status bar showing the date as 03-12-2022.

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

ANS :

The screenshot shows the Oracle Live SQL interface. The SQL Worksheet contains the following query:

```
1 SELECT TEMP_F ,CITY FROM STATS
2 INNER JOIN STATION
3 ON STATS.ID = STATION.ID ;
```

The results are displayed in a table with two columns: TEMP_F and CITY.

TEMP_F	CITY
57.4	PHOENIX
91.7	PHOENIX
27.3	DENVER
74.8	DENVER
6.7	CARIBOU
65.8	CARIBOU

Download CSV
0 rows selected.

© 2022 Oracle - Live SQL 22.3.1, running Oracle Database 19c Enterprise Edition - 19.14.0.0.0 - Database Documentation - Ask Tom - Dev Gym
Built with ♥ using Oracle APEX - Privacy - Terms of Use

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.

ANS :

The screenshot shows the Oracle Live SQL interface. The SQL Worksheet contains the following query:

```
1 SELECT * FROM STATS , STATION
2 ORDER BY MONTH , RAIN_F ASC ;
```

The results are displayed in a table with columns: ID, MONTH, TEMP_F, RAIN_F, ID, CITY, STATE, LAT_N, LONG_W.

ID	MONTH	TEMP_F	RAIN_F	ID	CITY	STATE	LAT_N	LONG_W
44	1	27.3	18	66	CARIBOU	ME	47	68
44	1	27.3	18	13	PHOENIX	AZ	33	112
44	1	27.3	18	44	DENVER	CO	40	105
13	1	57.4	31	44	DENVER	CO	40	105
13	1	57.4	31	66	CARIBOU	ME	47	68
13	1	57.4	31	13	PHOENIX	AZ	33	112
66	1	6.7	2.1	13	PHOENIX	AZ	33	112
66	1	6.7	2.1	66	CARIBOU	ME	47	68
66	1	6.7	2.1	44	DENVER	CO	40	105
44	7	74.8	2.11	66	CARIBOU	ME	47	68
44	7	74.8	2.11	13	PHOENIX	AZ	33	112
44	7	74.8	2.11	44	DENVER	CO	40	105
66	7	65.8	4.52	13	PHOENIX	AZ	33	112
66	7	65.8	4.52	44	DENVER	CO	40	105
66	7	65.8	4.52	66	CARIBOU	ME	47	68
13	7	91.7	5.15	13	PHOENIX	AZ	33	112
13	7	91.7	5.15	44	DENVER	CO	40	105
13	7	91.7	5.15	66	CARIBOU	ME	47	68

© 2022 Oracle - Live SQL 22.3.1, running Oracle Database 19c Enterprise Edition - 19.14.0.0.0 - Database Documentation - Ask Tom - Dev Gym
Built with ♥ using Oracle APEX - Privacy - Terms of Use

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

ANS :

The screenshot shows the Oracle Live SQL interface. The query entered is:

```
1 SELECT TEMP_F, CITY, LAT_N FROM STATS, STATION
2 WHERE MONTH = 7
3 ORDER BY TEMP_F ASC;
```

The results are displayed in a table with columns TEMP_F, CITY, and LAT_N:

TEMP_F	CITY	LAT_N
65.8	DENVER	40
65.8	PHOENIX	33
65.8	CARIBOU	47
74.8	PHOENIX	33
74.8	DENVER	40
74.8	CARIBOU	47
91.7	DENVER	40
91.7	PHOENIX	33
91.7	CARIBOU	47

Download CSV
0 rows selected.

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

ANS:

The screenshot shows the Oracle Live SQL interface. The query entered is:

```
1 SELECT MAX(TEMP_F), MIN(TEMP_F), AVG(RAIN_I), CITY
2 FROM STATS, STATION
3 GROUP BY CITY;
```

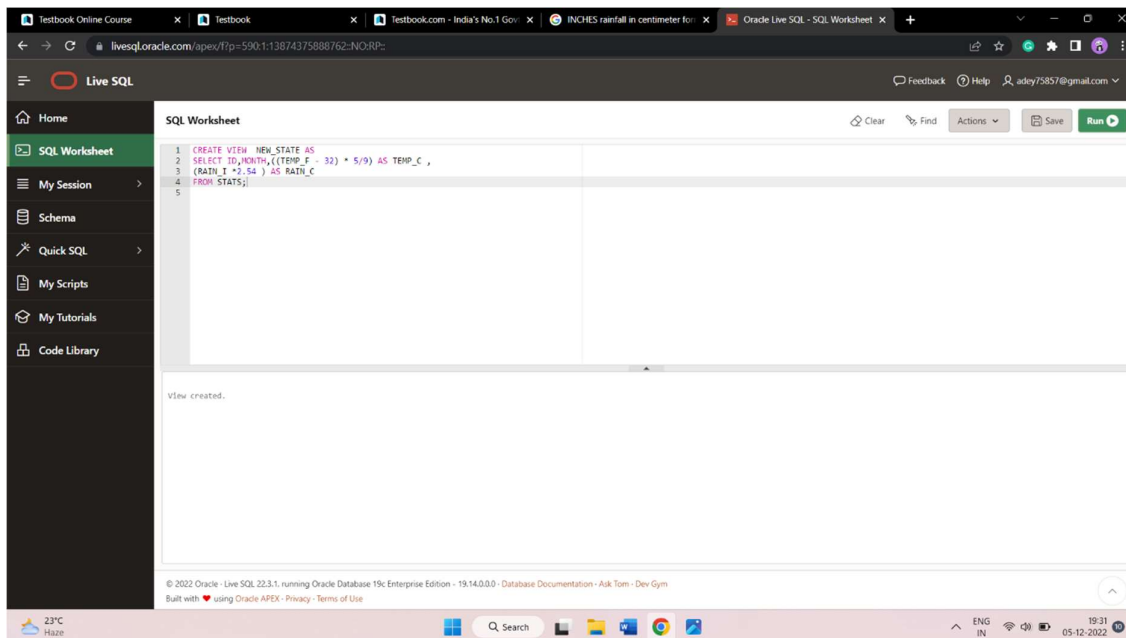
The results are displayed in a table with columns MAX(TEMP_F), MIN(TEMP_F), AVG(RAIN_I), and CITY:

MAX(TEMP_F)	MIN(TEMP_F)	AVG(RAIN_I)	CITY
91.7	6.7	2.395	CARIBOU
91.7	6.7	2.395	DENVER
91.7	6.7	2.395	PHOENIX

Download CSV
3 rows selected.

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

ANS :



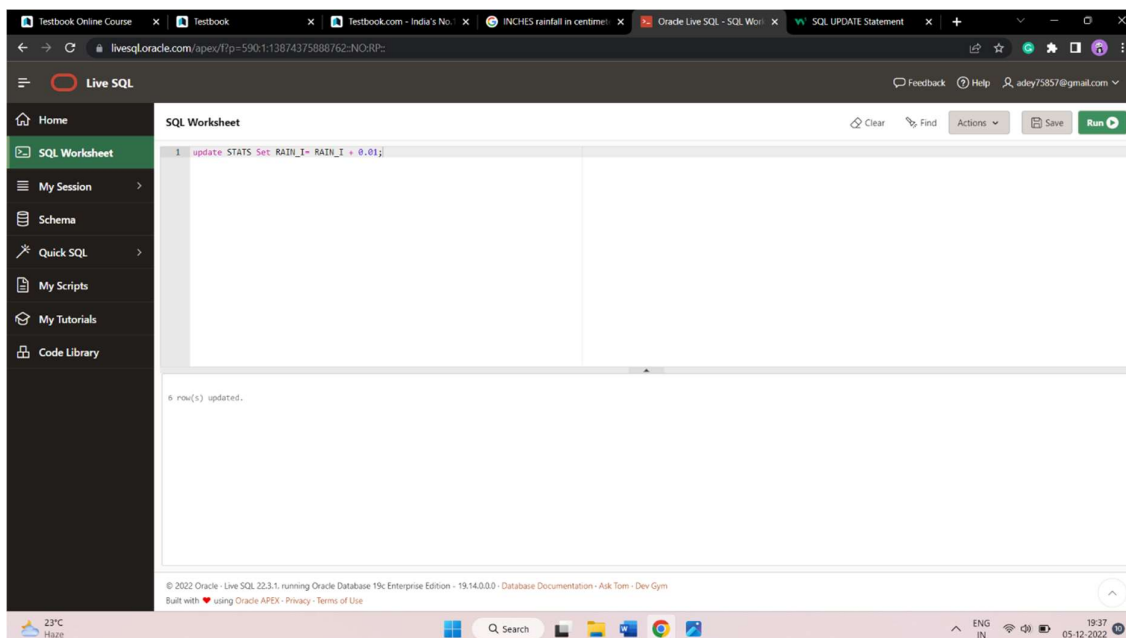
The screenshot shows the Oracle Live SQL interface. The SQL Worksheet contains the following code:

```
1 CREATE VIEW NEW_STATE AS
2 SELECT ID, MONTH, ((TEMP_F - 32) * 5/9) AS TEMP_C ,
3 (RAIN_I * 2.54 ) AS RAIN_C
4 FROM STATS;
5
```

The output area shows "View created." The bottom status bar indicates the database is Oracle 19c Enterprise Edition 19.14.0.0.0.

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

ANS :



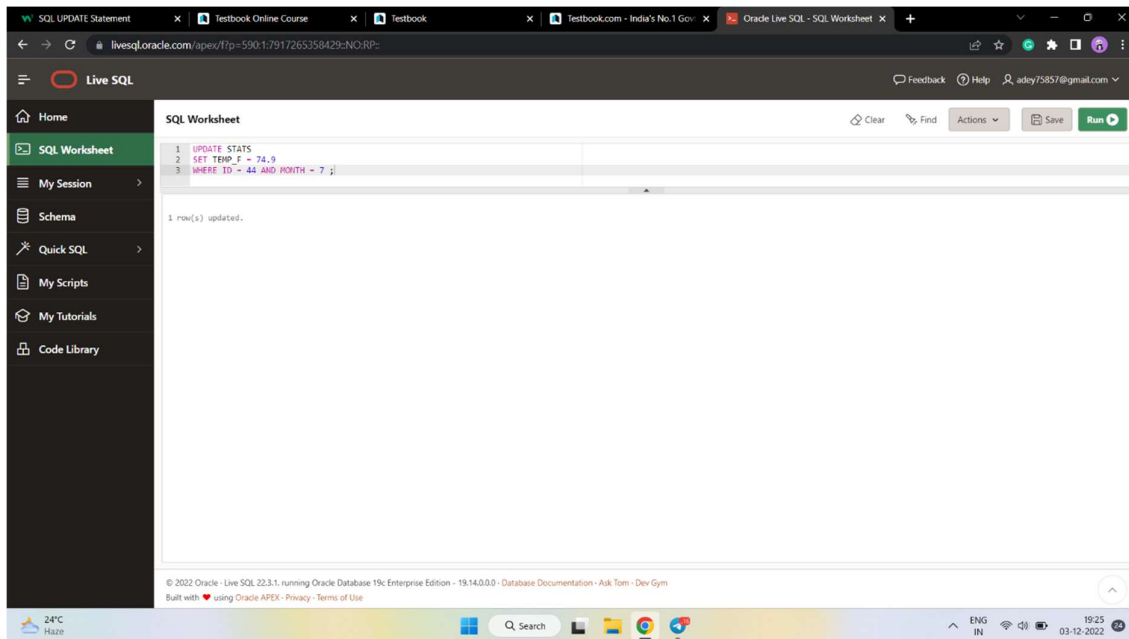
The screenshot shows the Oracle Live SQL interface. The SQL Worksheet contains the following code:

```
1 update STATS Set RAIN_I= RAIN_I + 0.01;
```

The output area shows "6 row(s) updated." The bottom status bar indicates the database is Oracle 19c Enterprise Edition 19.14.0.0.0.

13. Update Denver's July temperature reading as 74.9

ANS :



The screenshot displays the Oracle Live SQL web interface. The browser's address bar shows the URL `livesql.oracle.com/apex/f?p=590:17917265358429::NO::RP::`. The interface includes a sidebar with navigation options: Home, SQL Worksheet (selected), My Session, Schema, Quick SQL, My Scripts, My Tutorials, and Code Library. The main area is titled "SQL Worksheet" and contains the following SQL statement:

```
1 UPDATE STATS
2 SET TEMP_F = 74.9
3 WHERE ID = 44 AND MONTH = 7 ;
```

Below the SQL statement, the execution result is displayed: "1 row(s) updated." The footer of the interface indicates the version: "© 2022 Oracle - Live SQL 22.3.1, running Oracle Database 19c Enterprise Edition - 19.14.0.0.0 - Database Documentation - Auk Tom - Dev Gym". The Windows taskbar at the bottom shows the date as 03-12-2022 and the time as 19:25.