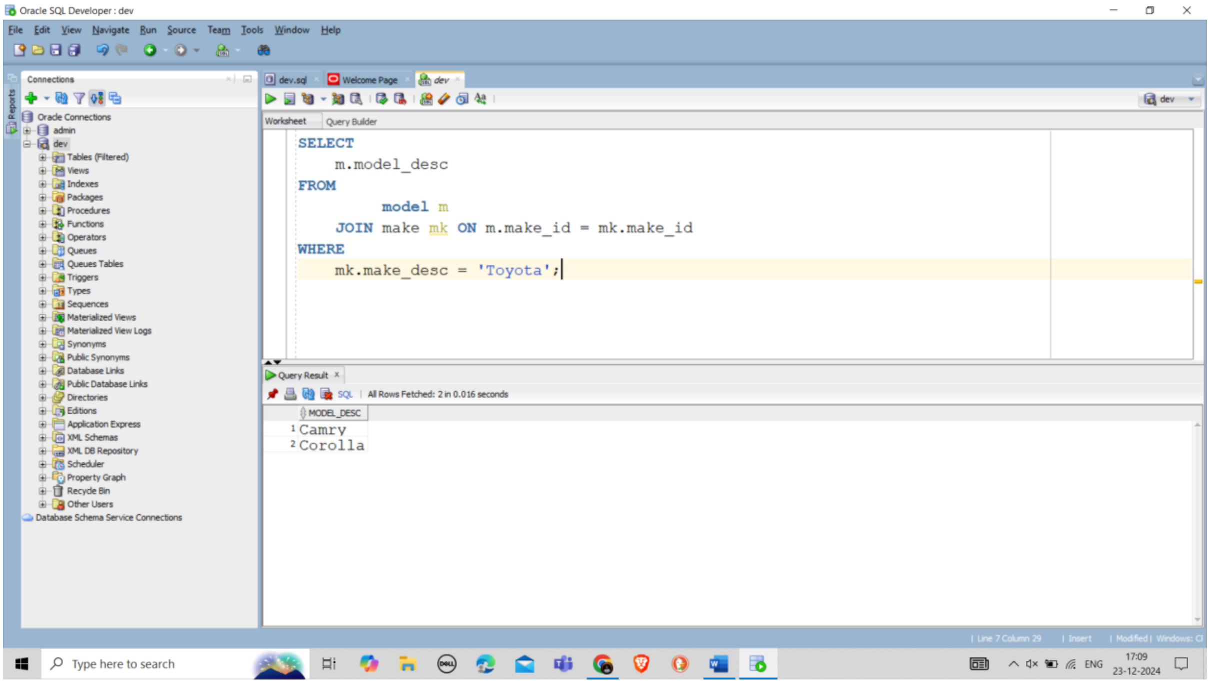
VEHICLE INSURANCE REPORT

Data Retrieval & Joins

1.Write a SQL query to retrieve all models associated with a given make (e.g., "Toyota").

```
SELECT

   m.model_desc

FROM

       model m

   JOIN make mk ON m.make_id = mk.make_id

WHERE

   mk.make_desc = 'Toyota';
```



Oracle SQL Developer : dev
File Edit View Navigate Run Source Team Tools Window Help
Connections
dev.sql
Welcome Page
dev
Worksheet
Query Builder
Query Result
SQL

```
SELECT
    m.model_desc
FROM
         model m
    JOIN make mk ON m.make_id = mk.make_id
WHERE
    mk.make_desc = 'Toyota';
```

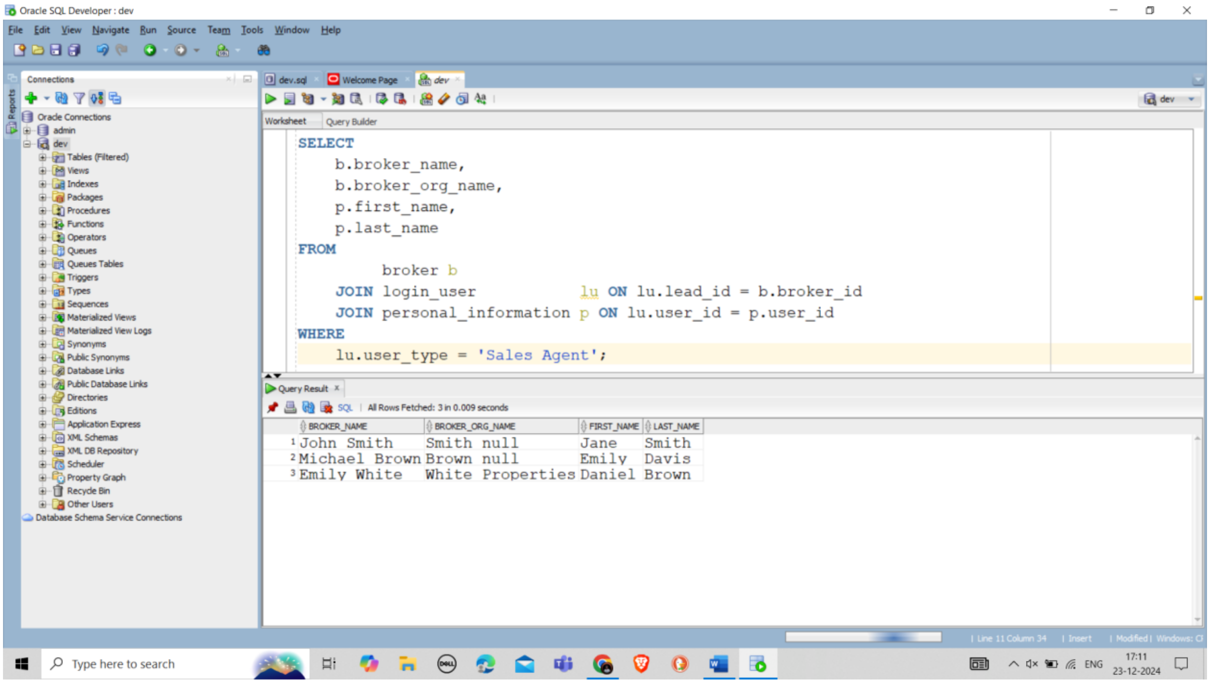
All Rows Fetched: 2 in 0.016 seconds

```
  MODEL_DESC
1 Camry
2 Corolla
```

2.List all brokers and their associated sales agents:

Use a JOIN clause to retrieve the Broker_name and Broker_org_name from the Broker table and the First_name, Last_name of associated sales agents from the Personal_Information and Login_User tables.

```
SELECT

   b.broker_name,

   b.broker_org_name,
   p.first_name,
   p.last_name
FROM
        broker b
   JOIN login_user          lu ON lu.lead_id = b.broker_id
   JOIN personal_information p ON lu.user_id = p.user_id
WHERE
   lu.user_type = 'Sales Agent';
```



```
SELECT
    b.broker_name,
    b.broker_org_name,
    p.first_name,
    p.last_name
FROM
         broker b
    JOIN login_user          lu ON lu.lead_id = b.broker_id
    JOIN personal_information p ON lu.user_id = p.user_id
WHERE
    lu.user_type = 'Sales Agent';
```

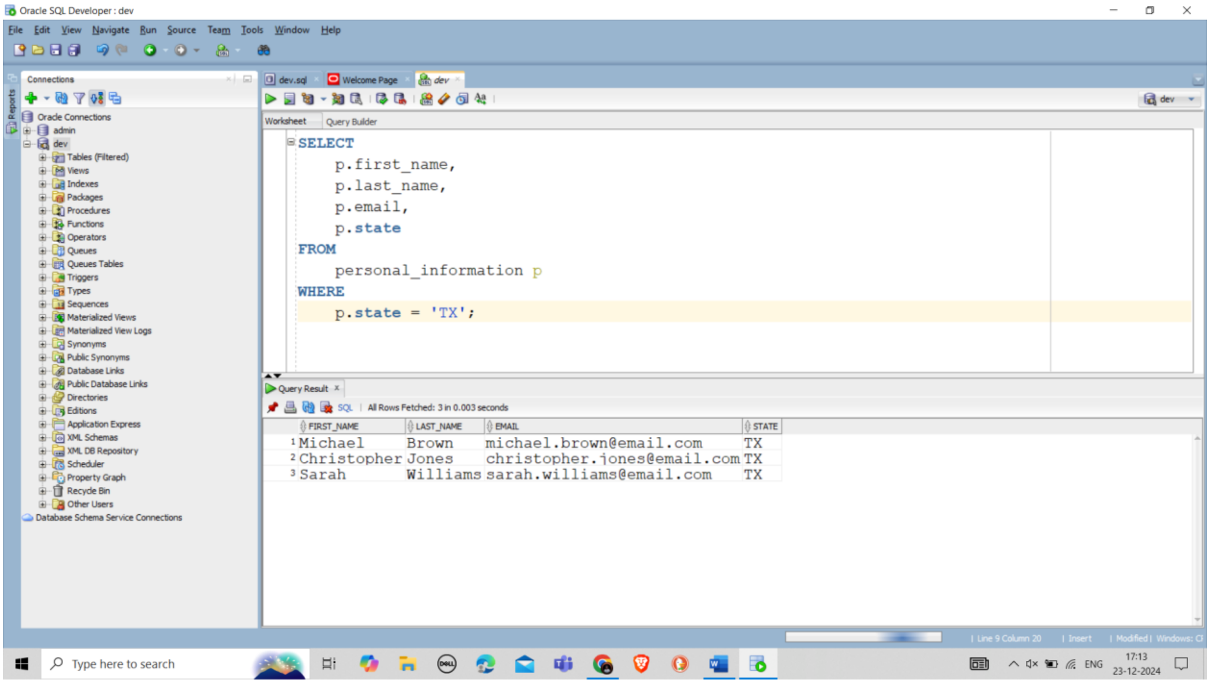
All Rows Fetched: 3 in 0.009 seconds

```
  BROKER_NAME    BROKER_ORG_NAME   FIRST_NAME LAST_NAME
1 John Smith     Smith null        Jane       Smith
2 Michael Brown  Brown null        Emily      Davis
3 Emily White    White Properties  Daniel     Brown
```

3.Find all users in a specific state:

Retrieve user information (e.g., First_name, Last_name, email,state) from Personal_Information for users residing in a particular state.

```
SELECT
    p.first_name,
    p.last_name,
    p.email,
    p.state
FROM
    personal_information p
WHERE
    p.state = 'TX';
```



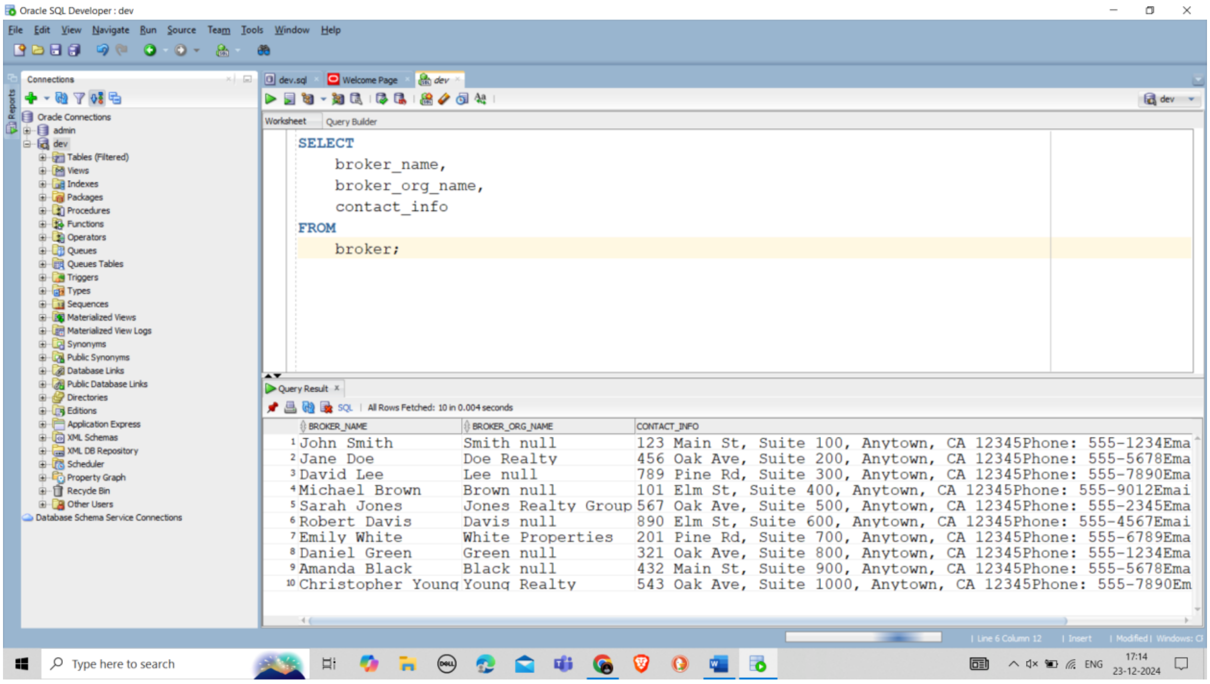
```
SELECT
    p.first_name,
    p.last_name,
    p.email,
    p.state
FROM
    personal_information p
WHERE
    p.state = 'TX';
```

```
All Rows Fetched: 3 in 0.003 seconds

   FIRST_NAME  LAST_NAME EMAIL                          STATE
 1 Michael     Brown     michael.brown@email.com        TX
 2 Christopher Jones     christopher.jones@email.com    TX
 3 Sarah       Williams  sarah.williams@email.com       TX
```

4.Get contact information for all brokers:

Extract the Broker_name, Broker_org_name, and contact_info from the Broker table.

```
SELECT
    broker_name,
    broker_org_name,
    contact_info
FROM
    broker;
```



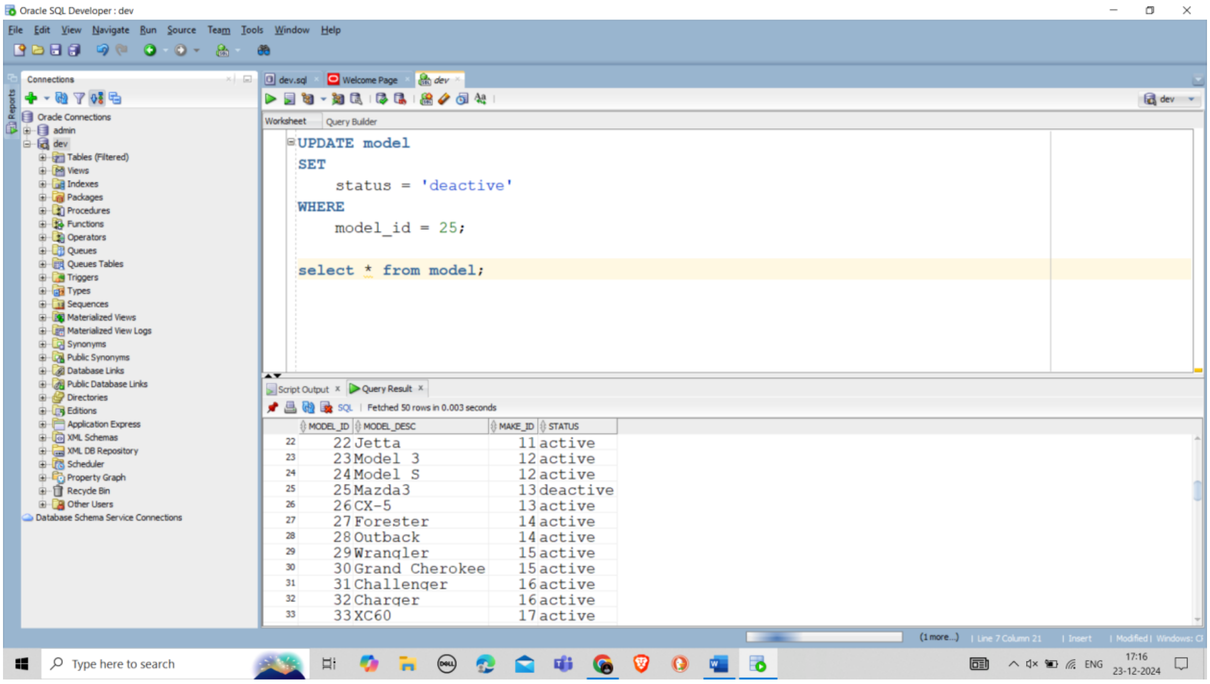
```
SELECT
    broker_name,
    broker_org_name,
    contact_info
FROM
    broker;
```

```
All Rows Fetched: 10 in 0.004 seconds

   BROKER_NAME       BROKER_ORG_NAME    CONTACT_INFO
 1 John Smith        Smith null         123 Main St, Suite 100, Anytown, CA 12345Phone: 555-1234Ema
 2 Jane Doe          Doe Realty         456 Oak Ave, Suite 200, Anytown, CA 12345Phone: 555-5678Ema
 3 David Lee         Lee null           789 Pine Rd, Suite 300, Anytown, CA 12345Phone: 555-7890Ema
 4 Michael Brown     Brown null         101 Elm St, Suite 400, Anytown, CA 12345Phone: 555-9012Emai
 5 Sarah Jones       Jones Realty Group 567 Oak Ave, Suite 500, Anytown, CA 12345Phone: 555-2345Ema
 6 Robert Davis      Davis null         890 Elm St, Suite 600, Anytown, CA 12345Phone: 555-4567Emai
 7 Emily White       White Properties   201 Pine Rd, Suite 700, Anytown, CA 12345Phone: 555-6789Ema
 8 Daniel Green      Green null         321 Oak Ave, Suite 800, Anytown, CA 12345Phone: 555-1234Ema
 9 Amanda Black      Black null         432 Main St, Suite 900, Anytown, CA 12345Phone: 555-5678Ema
10 Christopher Young Young Realty       543 Oak Ave, Suite 1000, Anytown, CA 12345Phone: 555-7890Em
```

Data Updates & Modifications

1.Update the status of a model to 'deactive'.

```
UPDATE model

SET

    status = 'deactive'

WHERE

    model_id = 25;
```



Oracle SQL Developer : dev

```
UPDATE model
SET
    status = 'deactive'
WHERE
    model_id = 25;

select * from model;
```

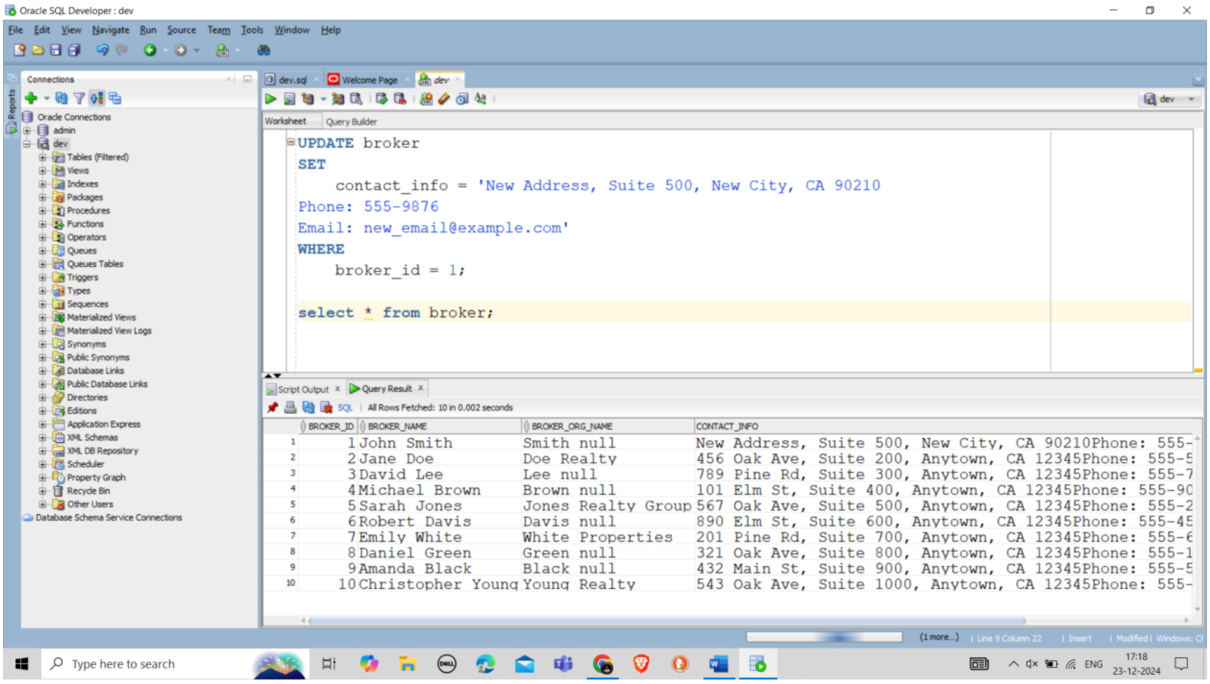
Script Output × | Query Result ×

SQL | Fetched 50 rows in 0.003 seconds

	MODEL_ID	MODEL_DESC	MAKE_ID	STATUS
22	22	Jetta	11	active
23	23	Model 3	12	active
24	24	Model S	12	active
25	25	Mazda3	13	deactive
26	26	CX-5	13	active
27	27	Forester	14	active
28	28	Outback	14	active
29	29	Wrangler	15	active
30	30	Grand Cherokee	15	active
31	31	Challenger	16	active
32	32	Charger	16	active
33	33	XC60	17	active

2.Change the contact information for a specific broker.

```
UPDATE broker

SET

    contact_info = 'New Address, Suite 500, New City, CA 90210

Phone: 555-9876

Email: new_email@example.com'

WHERE

    broker_id = 1;
```



```sql
UPDATE broker
SET
    contact_info = 'New Address, Suite 500, New City, CA 90210
Phone: 555-9876
Email: new_email@example.com'
WHERE
    broker_id = 1;

select * from broker;
```

All Rows Fetched: 10 in 0.002 seconds

```
   BROKER_ID BROKER_NAME         BROKER_ORG_NAME     CONTACT_INFO
1          1 John Smith          Smith null          New Address, Suite 500, New City, CA 90210Phone: 555-
2          2 Jane Doe            Doe Realty          456 Oak Ave, Suite 200, Anytown, CA 12345Phone: 555-5
3          3 David Lee           Lee null            789 Pine Rd, Suite 300, Anytown, CA 12345Phone: 555-7
4          4 Michael Brown       Brown null          101 Elm St, Suite 400, Anytown, CA 12345Phone: 555-90
5          5 Sarah Jones         Jones Realty Group  567 Oak Ave, Suite 500, Anytown, CA 12345Phone: 555-2
6          6 Robert Davis        Davis null          890 Elm St, Suite 600, Anytown, CA 12345Phone: 555-45
7          7 Emily White         White Properties    201 Pine Rd, Suite 700, Anytown, CA 12345Phone: 555-6
8          8 Daniel Green        Green null          321 Oak Ave, Suite 800, Anytown, CA 12345Phone: 555-1
9          9 Amanda Black        Black null          432 Main St, Suite 900, Anytown, CA 12345Phone: 555-5
10        10 Christopher Young   Young Realty        543 Oak Ave, Suite 1000, Anytown, CA 12345Phone: 555-
```

3.Deactivate the login of a user.

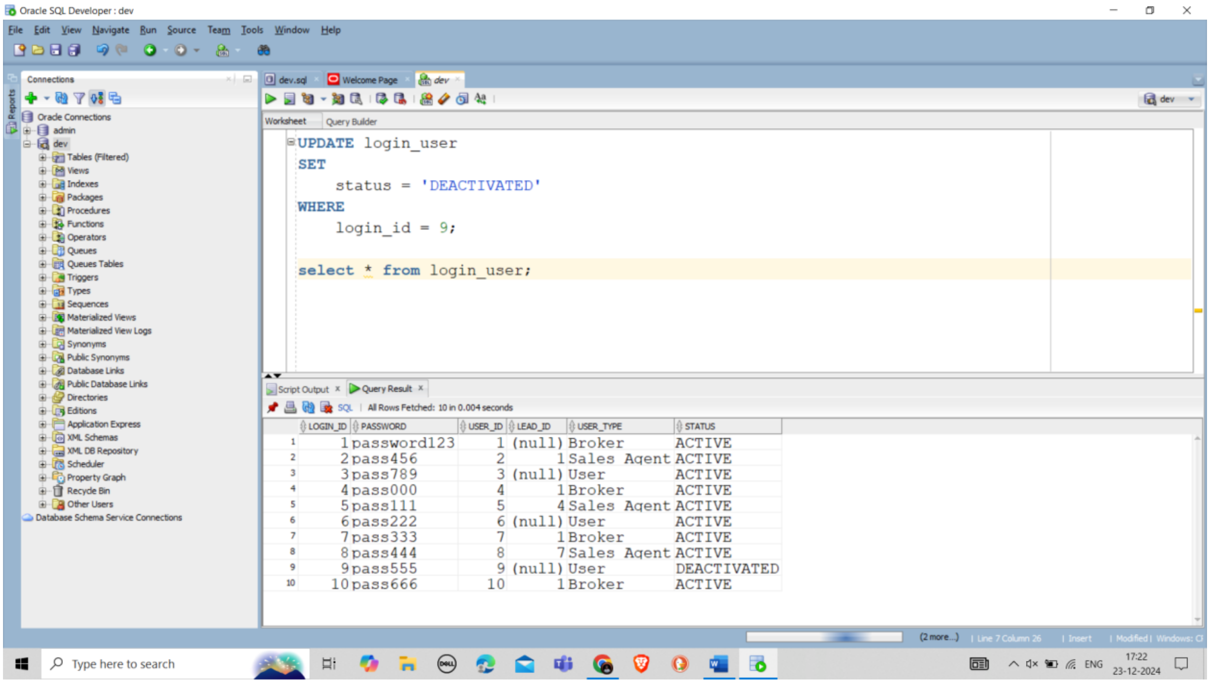
UPDATE login_user

SET

status = 'DEACTIVATED'

WHERE

login_id = 9;



```sql
UPDATE login_user
SET
    status = 'DEACTIVATED'
WHERE
    login_id = 9;

select * from login_user;
```

All Rows Fetched: 10 in 0.004 seconds

```
   LOGIN_ID PASSWORD     USER_ID LEAD_ID USER_TYPE    STATUS
1         1 password123        1 (null)  Broker       ACTIVE
2         2 pass456            2       1 Sales Agent  ACTIVE
3         3 pass789            3 (null)  User         ACTIVE
4         4 pass000            4       1 Broker       ACTIVE
5         5 pass111            5       4 Sales Agent  ACTIVE
6         6 pass222            6 (null)  User         ACTIVE
7         7 pass333            7       1 Broker       ACTIVE
8         8 pass444            8       7 Sales Agent  ACTIVE
9         9 pass555            9 (null)  User         DEACTIVATED
10       10 pass666           10       1 Broker       ACTIVE
```

Data Analysis & Reporting

1.Count the number of active and inactive models for each make.

SELECT mk.make_desc,

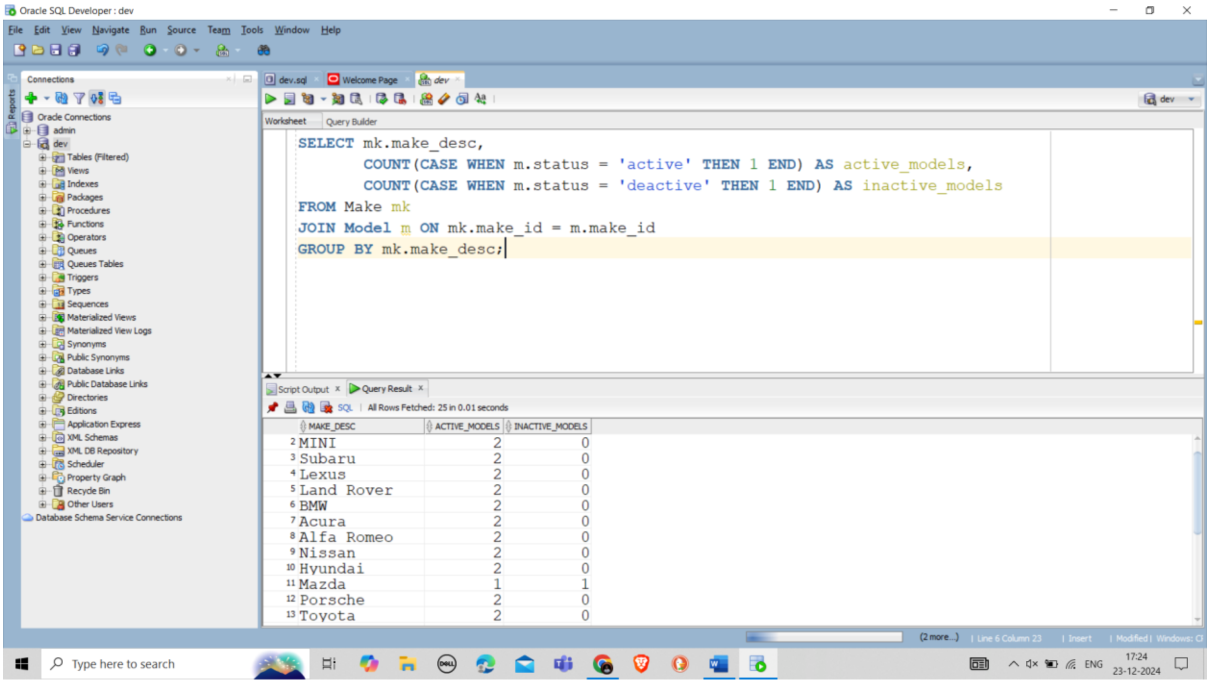
    COUNT(CASE WHEN m.status = 'active' THEN 1 END) AS active_models,

    COUNT(CASE WHEN m.status = 'deactive' THEN 1 END) AS inactive_models

FROM Make mk

JOIN Model m ON mk.make_id = m.make_id

GROUP BY mk.make_desc;



```
SELECT mk.make_desc,
       COUNT(CASE WHEN m.status = 'active' THEN 1 END) AS active_models,
       COUNT(CASE WHEN m.status = 'deactive' THEN 1 END) AS inactive_models
FROM Make mk
JOIN Model m ON mk.make_id = m.make_id
GROUP BY mk.make_desc;
```

All Rows Fetched: 25 in 0.01 seconds

	MAKE_DESC	ACTIVE_MODELS	INACTIVE_MODELS
2	MINI	2	0
3	Subaru	2	0
4	Lexus	2	0
5	Land Rover	2	0
6	BMW	2	0
7	Acura	2	0
8	Alfa Romeo	2	0
9	Nissan	2	0
10	Hyundai	2	0
11	Mazda	1	1
12	Porsche	2	0
13	Toyota	2	0

2.Determine the total number of brokers, sales agents, and users.

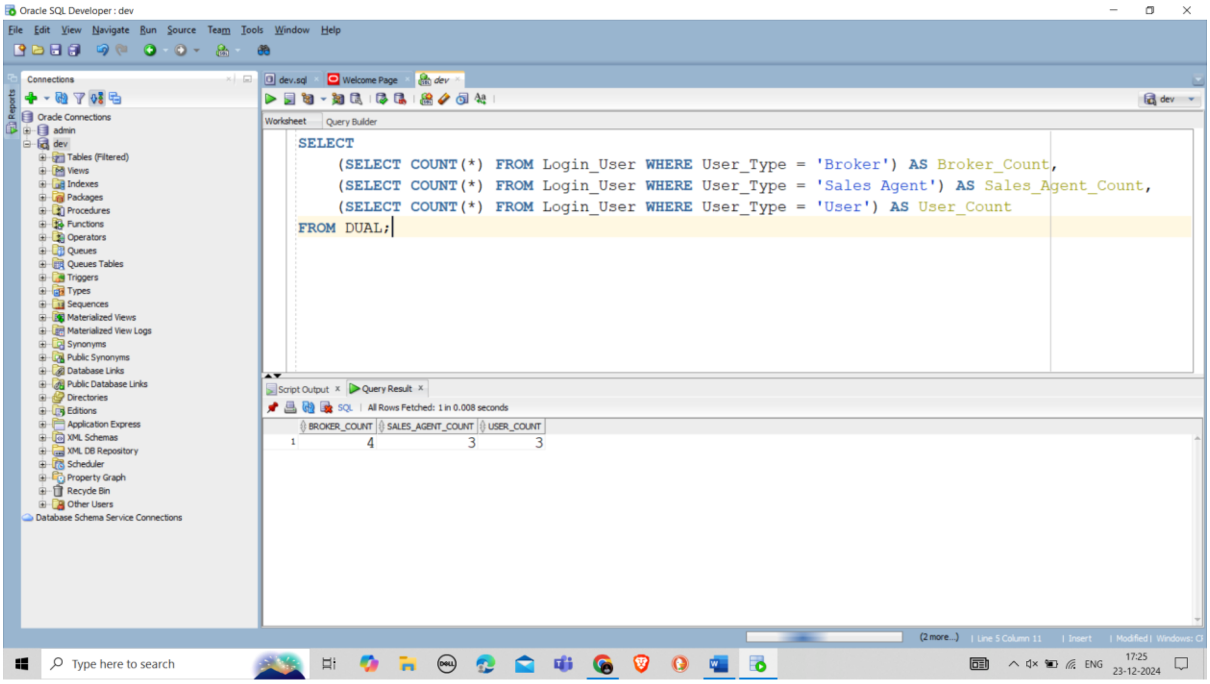
SELECT

  (SELECT COUNT(*) FROM Login_User WHERE User_Type = 'Broker') AS Broker_Count,

  (SELECT COUNT(*) FROM Login_User WHERE User_Type = 'Sales Agent') AS Sales_Agent_Count,

  (SELECT COUNT(*) FROM Login_User WHERE User_Type = 'User') AS User_Count

FROM DUAL;



```
SELECT
    (SELECT COUNT(*) FROM Login_User WHERE User_Type = 'Broker') AS Broker_Count,
    (SELECT COUNT(*) FROM Login_User WHERE User_Type = 'Sales Agent') AS Sales_Agent_Count,
    (SELECT COUNT(*) FROM Login_User WHERE User_Type = 'User') AS User_Count
FROM DUAL;
```

All Rows Fetched: 1 in 0.008 seconds

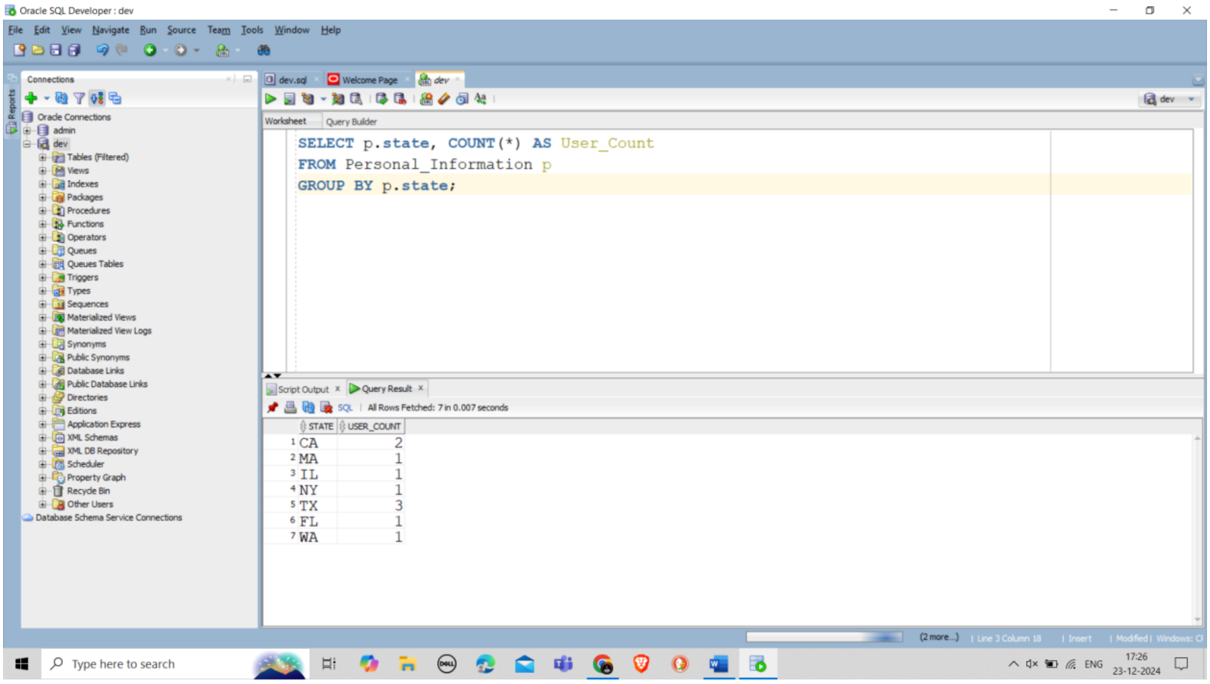
```
    BROKER_COUNT  SALES_AGENT_COUNT  USER_COUNT
1              4                  3           3
```

3.Find the number of users in each city.

SELECT p.state, COUNT(*) AS User_Count

FROM Personal_Information p

GROUP BY p.state;



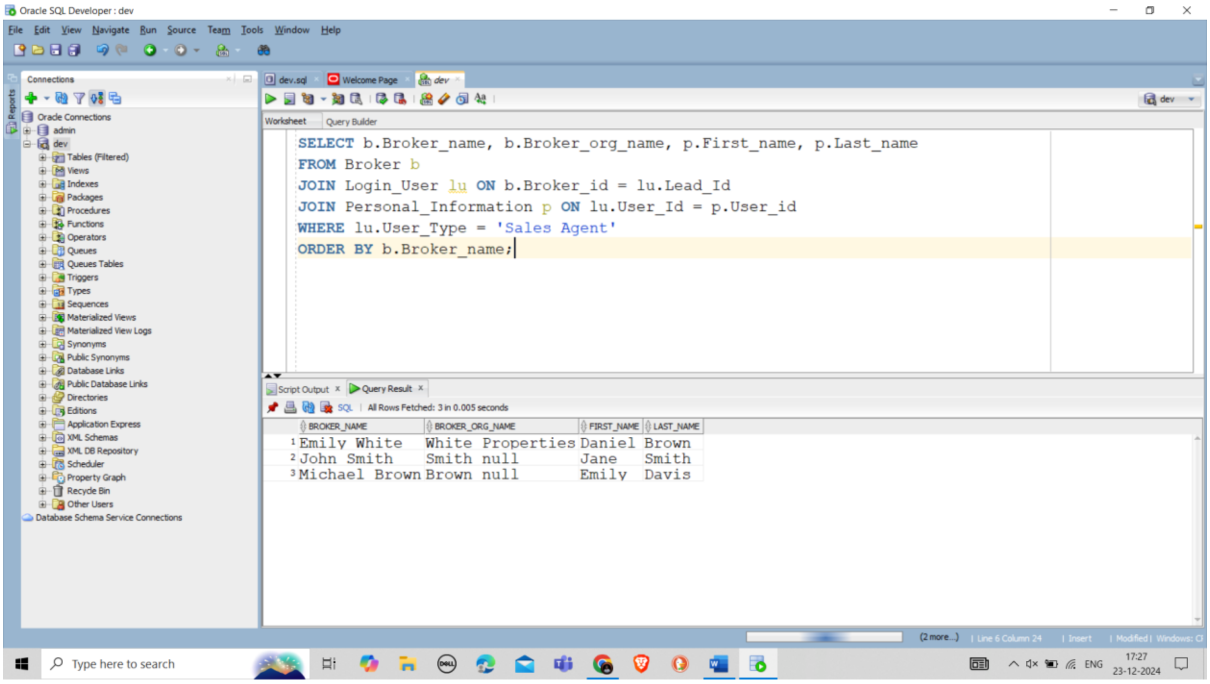
```
SELECT p.state, COUNT(*) AS User_Count
FROM Personal_Information p
GROUP BY p.state;
```

All Rows Fetched: 7 in 0.007 seconds

```
  STATE  USER_COUNT
1 CA              2
2 MA              1
3 IL              1
4 NY              1
5 TX              3
6 FL              1
7 WA              1
```

4.Generate a report of all brokers and their associated sales agents.

```
SELECT b.Broker_name, b.Broker_org_name, p.First_name, p.Last_name

FROM Broker b

JOIN Login_User lu ON b.Broker_id = lu.Lead_Id

JOIN Personal_Information p ON lu.User_Id = p.User_id

WHERE lu.User_Type = 'Sales Agent'

ORDER BY b.Broker_name;
```



```
SELECT b.Broker_name, b.Broker_org_name, p.First_name, p.Last_name
FROM Broker b
JOIN Login_User lu ON b.Broker_id = lu.Lead_Id
JOIN Personal_Information p ON lu.User_Id = p.User_id
WHERE lu.User_Type = 'Sales Agent'
ORDER BY b.Broker_name;
```

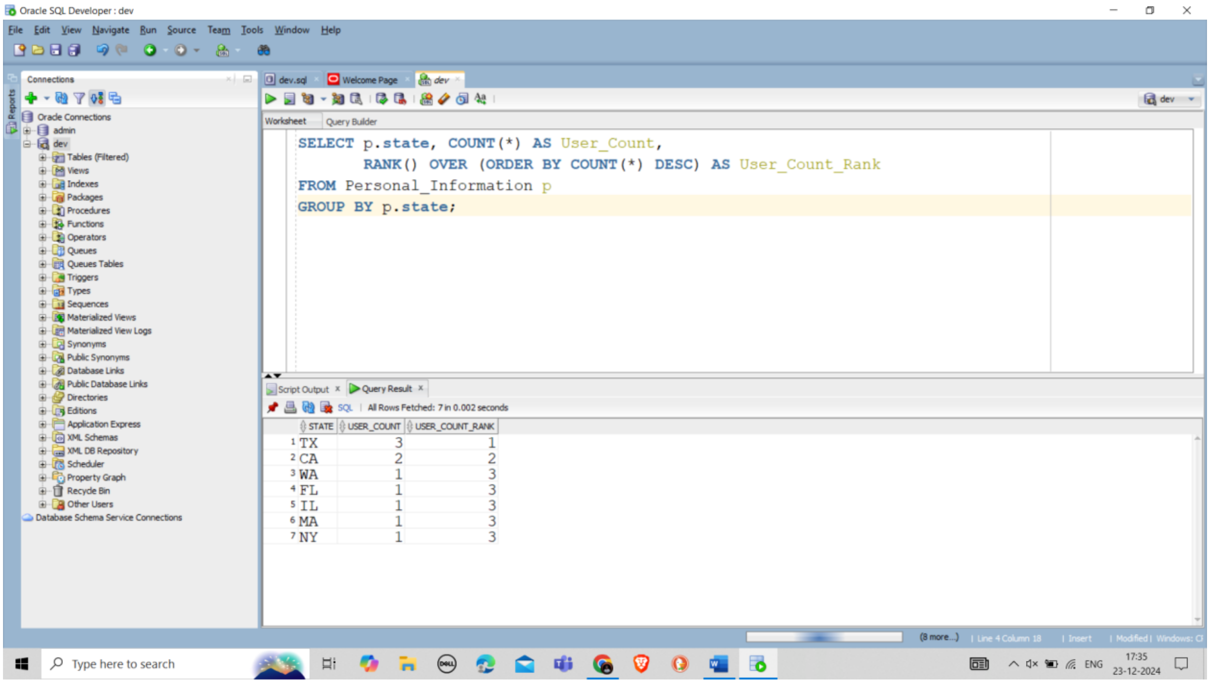
All Rows Fetched: 3 in 0.005 seconds

	BROKER_NAME	BROKER_ORG_NAME	FIRST_NAME	LAST_NAME
1	Emily White	White Properties	Daniel	Brown
2	John Smith	Smith null	Jane	Smith
3	Michael Brown	Brown null	Emily	Davis

Advanced Queries

1.Retrieve the top 5 states with the highest number of users.

```
SELECT p.state, COUNT(*) AS User_Count,

       RANK() OVER (ORDER BY COUNT(*) DESC) AS User_Count_Rank

FROM Personal_Information p

GROUP BY p.state;
```



```sql
SELECT p.state, COUNT(*) AS User_Count,
       RANK() OVER (ORDER BY COUNT(*) DESC) AS User_Count_Rank
FROM Personal_Information p
GROUP BY p.state;
```

All Rows Fetched: 7 in 0.002 seconds

	STATE	USER_COUNT	USER_COUNT_RANK
1	TX	3	1
2	CA	2	2
3	WA	1	3
4	FL	1	3
5	IL	1	3
6	MA	1	3
7	NY	1	3