Insurance Management & System Using SQL

Project Documentation

Done By : Divakaran S

1. Project Overview

This project models and analyzes vehicle insurance data using SQL. It covers user information, vehicles, brokers, quotes, and premium transactions. The objective is to derive insights such as active customers, premium distribution, and broker activities.

2. Tools & Technologies Used

- MySQL

- SQL Workbench

3. Database Table Descriptions

Table Name	Description
vehicle_make	Vehicle manufacturers
vehicle_model	Vehicle models linked to manufacturers
region	Geographical regions
state	Indian states linked to regions
city	Cities linked to states
product_config	Insurance products and premiums
user_personal_info	User profile and status
login_user	Login credentials and user status
broker_info	Insurance brokers and their organizations
quote_info	Quotes for insurance issued to users
premium_config	Tax and surcharge configuration
premium_summary	Premium calculations and totals
lov_data	List of values for dropdowns

4. Database Schema

Database Creation

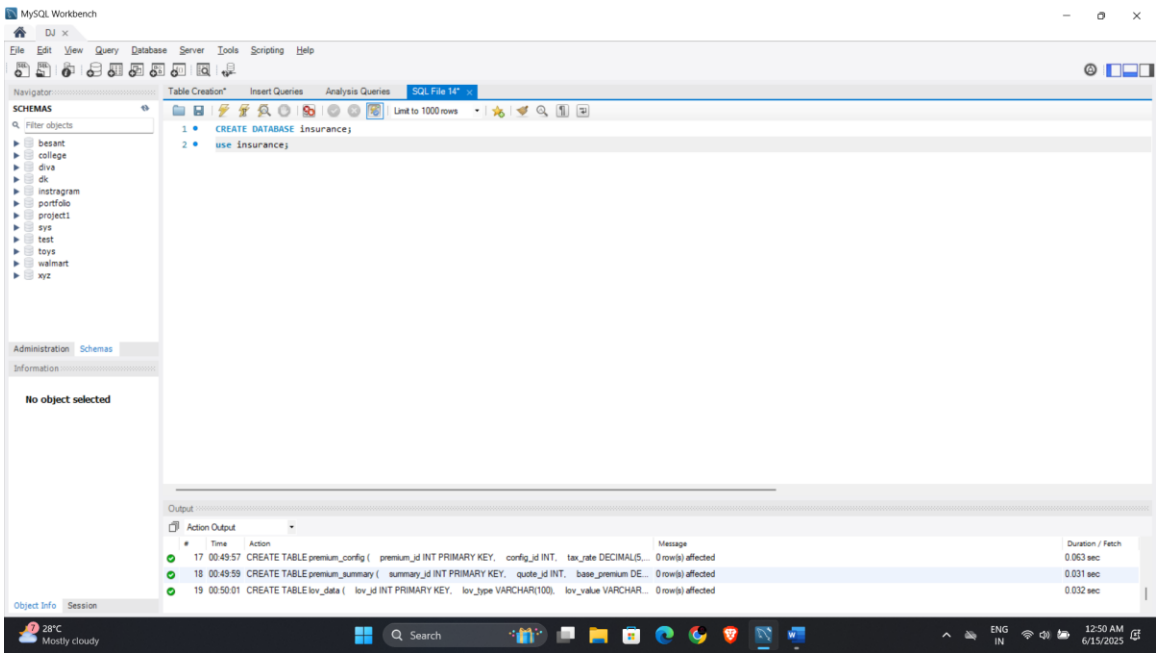
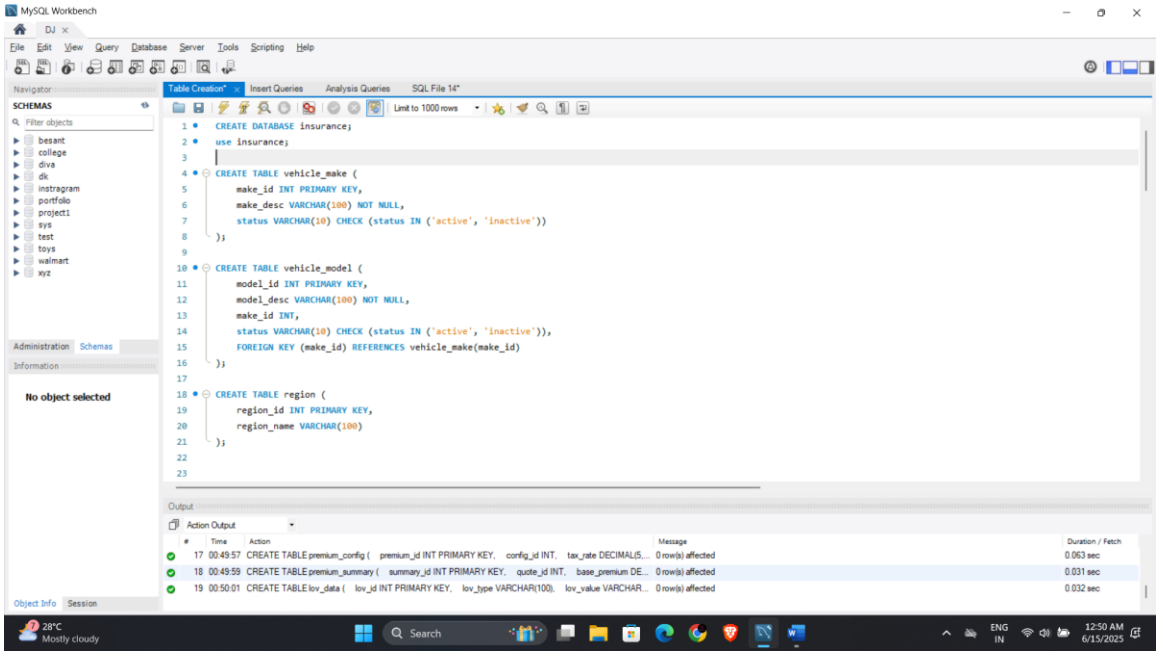
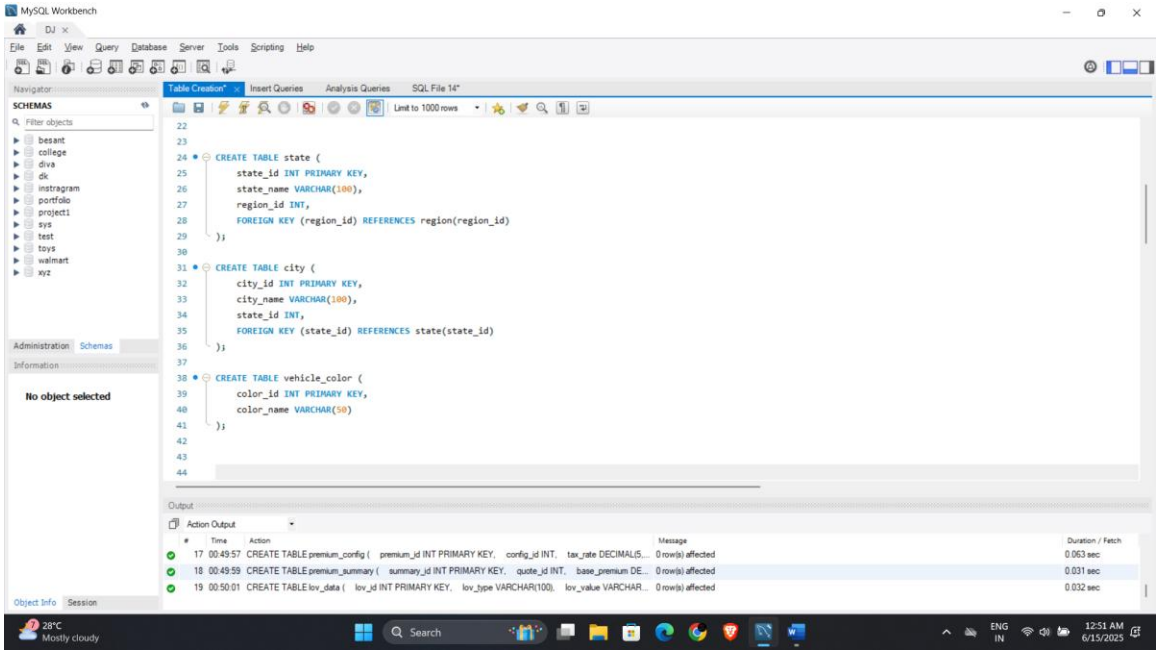
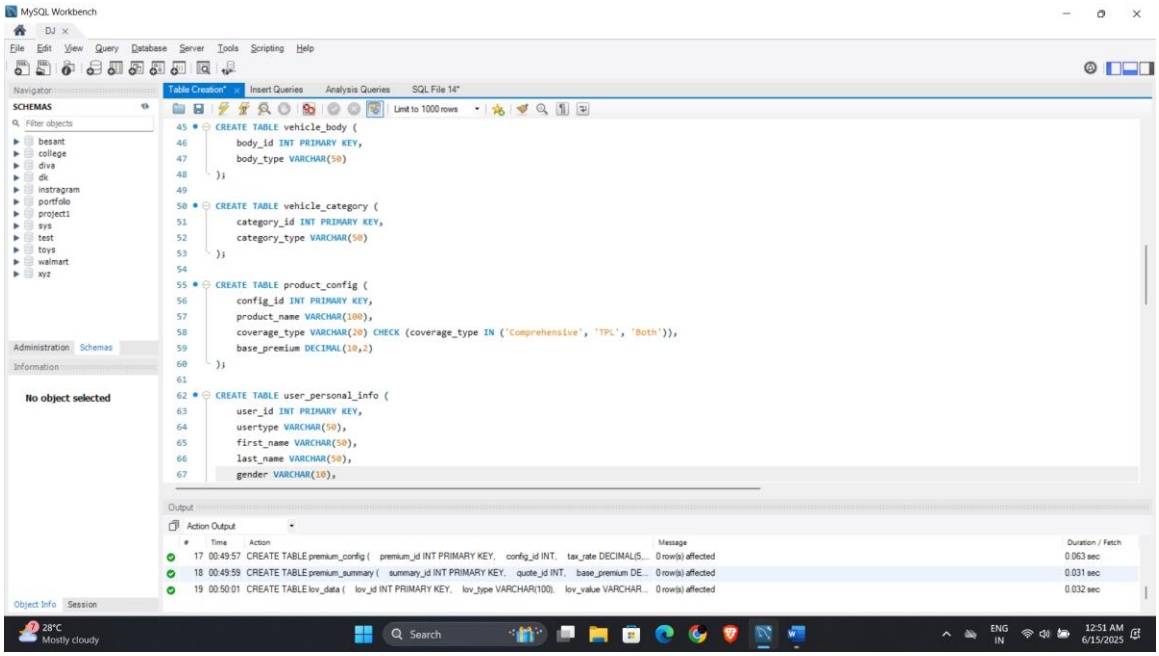
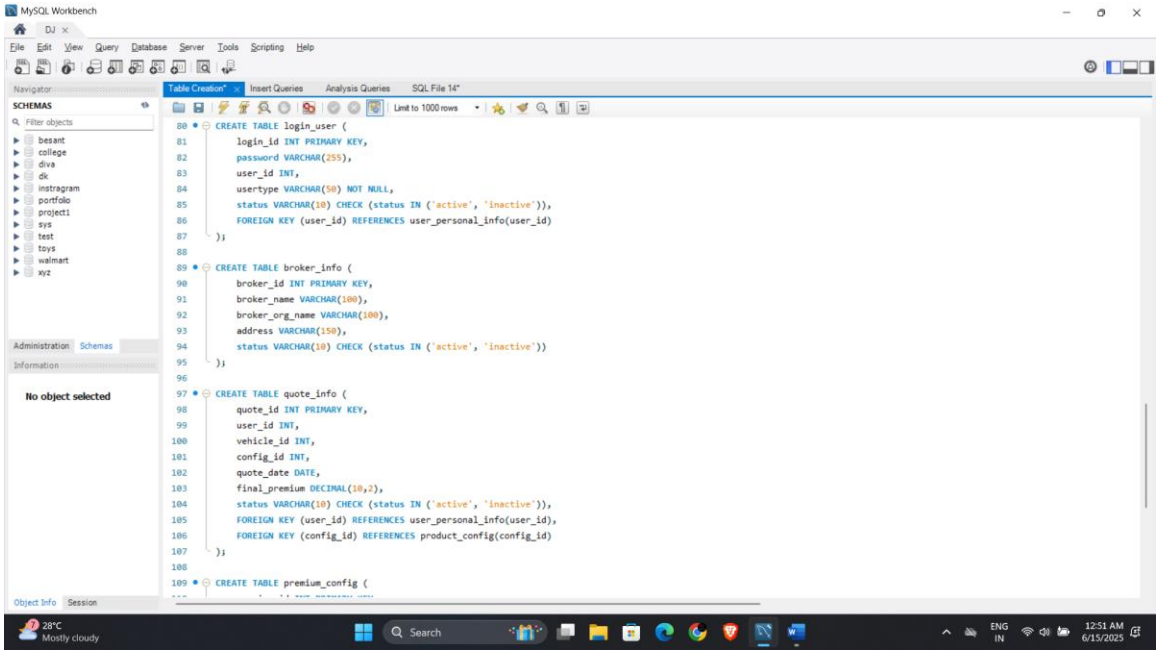


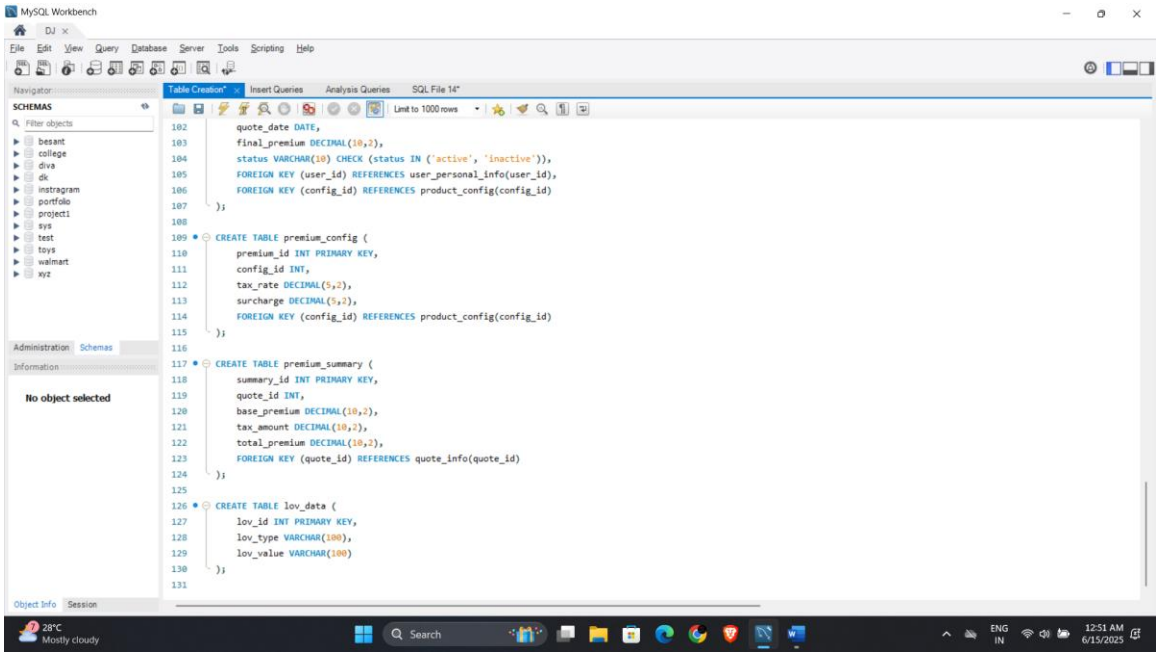
Table Creation



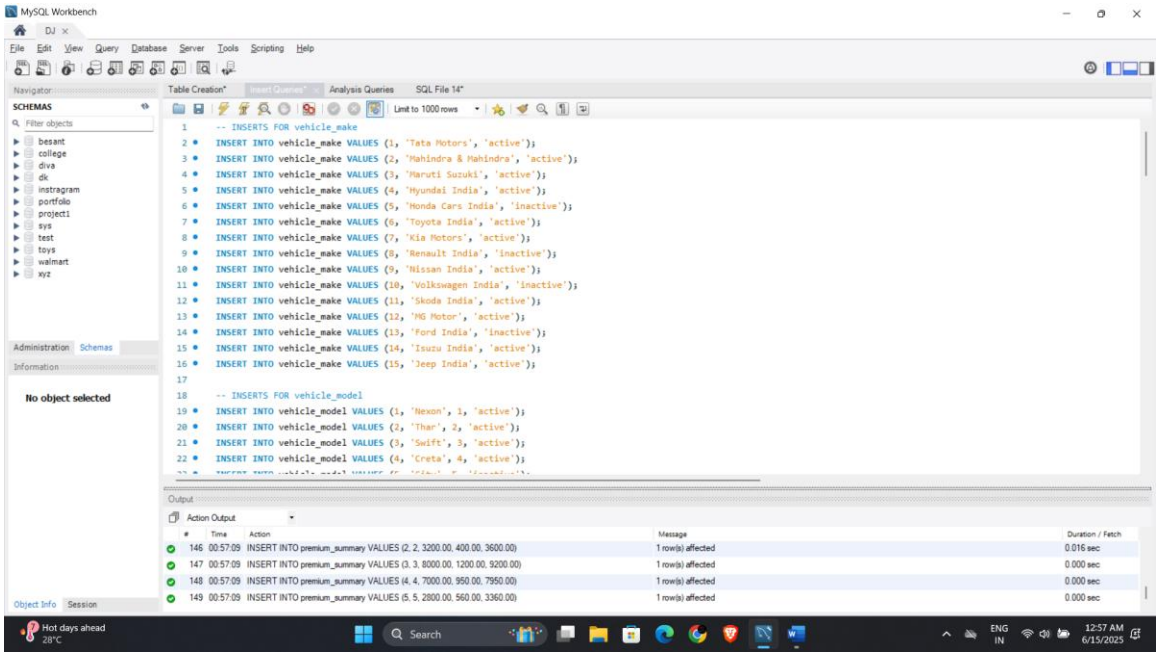

MySQL Workbench
DJ
File Edit View Query Database Server Tools Scripting Help
Navigator
SCHEMAS
Filter objects
besant
college
diva
dk
instragram
portfolio
project1
sys
test
toys
walmart
xyz
Administration Schemas
Information
No object selected
Object Info Session
Table Creation* Insert Queries Analysis Queries SQL File 14*
Limit to 1000 rows
22
23
24 CREATE TABLE state (
25 state_id INT PRIMARY KEY,
26 state_name VARCHAR(100),
27 region_id INT,
28 FOREIGN KEY (region_id) REFERENCES region(region_id)
29);
30
31 CREATE TABLE city (
32 city_id INT PRIMARY KEY,
33 city_name VARCHAR(100),
34 state_id INT,
35 FOREIGN KEY (state_id) REFERENCES state(state_id)
36);
37
38 CREATE TABLE vehicle_color (
39 color_id INT PRIMARY KEY,
40 color_name VARCHAR(50)
41);
42
43
44
Output
Action Output
Time Action Message Duration / Fetch
17 00:49:57 CREATE TABLE premium_config (premium_id INT PRIMARY KEY, config_id INT, tax_rate DECIMAL(5,... 0 row(s) affected 0.063 sec
18 00:49:59 CREATE TABLE premium_summary (summary_id INT PRIMARY KEY, quote_id INT, base_premium DE... 0 row(s) affected 0.031 sec
19 00:50:01 CREATE TABLE lov_data (lov_id INT PRIMARY KEY, lov_type VARCHAR(100), lov_value VARCHAR... 0 row(s) affected 0.032 sec
28°C
Mostly cloudy
Search
ENG
IN
12:51 AM
6/15/2025

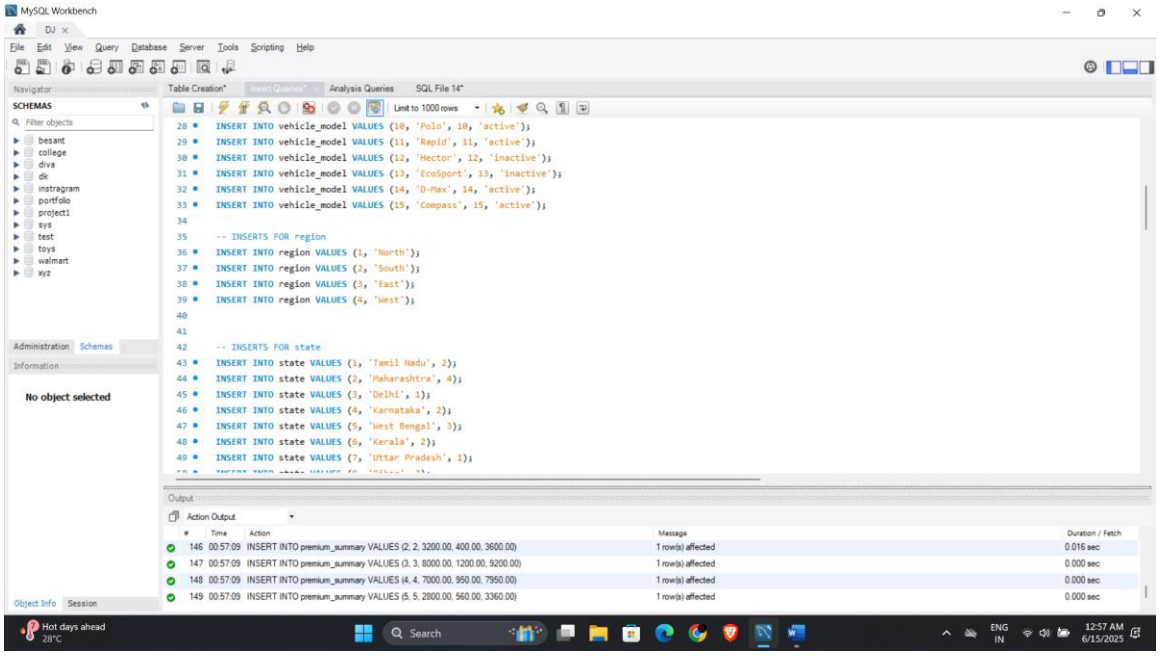

MySQL Workbench
DJ
File Edit View Query Database Server Tools Scripting Help
Navigator
SCHEMAS
Filter objects
besant
college
diva
dk
instragram
portfolio
project1
sys
test
toys
walmart
xyz
Administration Schemas
Information
No object selected
Object Info Session
Table Creation* Insert Queries Analysis Queries SQL File 14*
Limit to 1000 rows
45 CREATE TABLE vehicle_body (
46 body_id INT PRIMARY KEY,
47 body_type VARCHAR(50)
48);
49
50 CREATE TABLE vehicle_category (
51 category_id INT PRIMARY KEY,
52 category_type VARCHAR(50)
53);
54
55 CREATE TABLE product_config (
56 config_id INT PRIMARY KEY,
57 product_name VARCHAR(100),
58 coverage_type VARCHAR(20) CHECK (coverage_type IN ('Comprehensive', 'TPL', 'Both')),
59 base_premium DECIMAL(10,2)
60);
61
62 CREATE TABLE user_personal_info (
63 user_id INT PRIMARY KEY,
64 usertype VARCHAR(50),
65 first_name VARCHAR(50),
66 last_name VARCHAR(50),
67 gender VARCHAR(10),
Output
Action Output
Time Action Message Duration / Fetch
17 00:49:57 CREATE TABLE premium_config (premium_id INT PRIMARY KEY, config_id INT, tax_rate DECIMAL(5,... 0 row(s) affected 0.063 sec
18 00:49:59 CREATE TABLE premium_summary (summary_id INT PRIMARY KEY, quote_id INT, base_premium DE... 0 row(s) affected 0.031 sec
19 00:50:01 CREATE TABLE lov_data (lov_id INT PRIMARY KEY, lov_type VARCHAR(100), lov_value VARCHAR... 0 row(s) affected 0.032 sec
28°C
Mostly cloudy
Search
ENG
IN
12:51 AM
6/15/2025

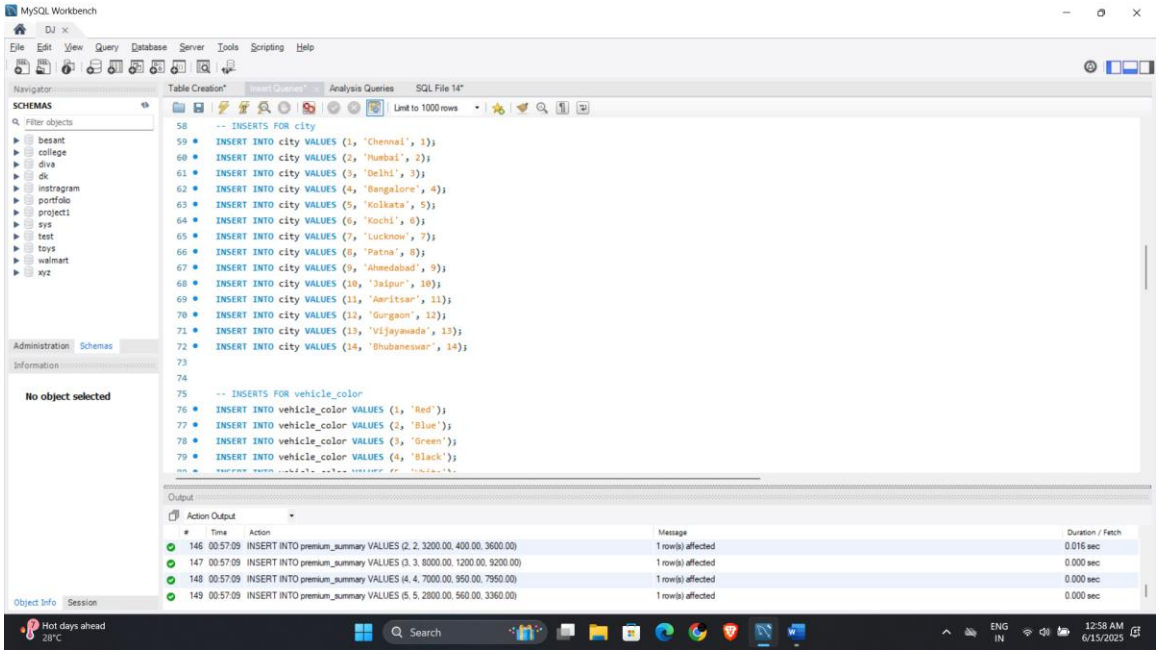

MySQL Workbench
DJ
File Edit View Query Database Server Tools Scripting Help
Navigator
SCHEMAS
Filter objects
besant
college
diva
dk
instragram
portfolio
project1
sys
test
toys
walmart
xyz
Administration Schemas
Information
No object selected
Object Info Session
Table Creation* Insert Queries Analysis Queries SQL File 14*
Limit to 1000 rows
CREATE TABLE login_user (
login_id INT PRIMARY KEY,
password VARCHAR(255),
user_id INT,
usertype VARCHAR(50) NOT NULL,
status VARCHAR(10) CHECK (status IN ('active', 'inactive')),
FOREIGN KEY (user_id) REFERENCES user_personal_info(user_id)
);
CREATE TABLE broker_info (
broker_id INT PRIMARY KEY,
broker_name VARCHAR(100),
broker_org_name VARCHAR(100),
address VARCHAR(150),
status VARCHAR(10) CHECK (status IN ('active', 'inactive'))
);
CREATE TABLE quote_info (
quote_id INT PRIMARY KEY,
user_id INT,
vehicle_id INT,
config_id INT,
quote_date DATE,
final_premium DECIMAL(10,2),
status VARCHAR(10) CHECK (status IN ('active', 'inactive')),
FOREIGN KEY (user_id) REFERENCES user_personal_info(user_id),
FOREIGN KEY (config_id) REFERENCES product_config(config_id)
);
CREATE TABLE premium_config (
28°C
Mostly cloudy
Search
ENG
IN
12:51 AM
6/15/2025

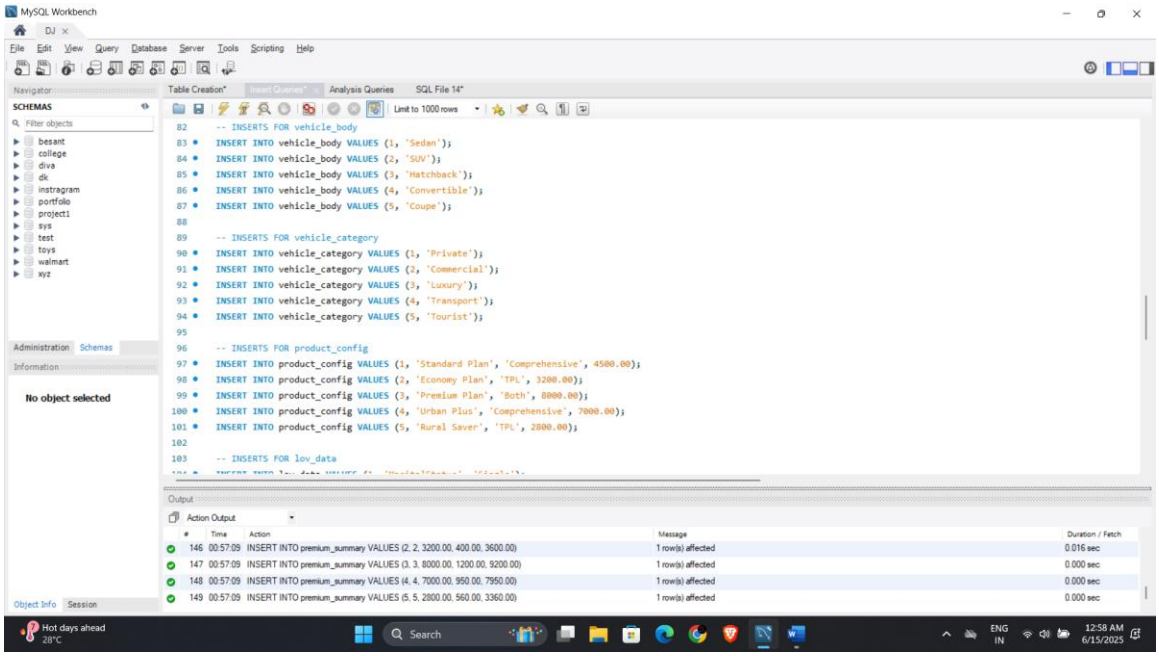

MySQL Workbench
DJ
File Edit View Query Database Server Tools Scripting Help
Navigator
SCHEMAS
Filter objects
besant
college
diva
dk
instragram
portfolio
project1
sys
test
toys
walmart
xyz
Administration Schemas
Information
No object selected
Object Info Session
Table Creation* Insert Queries Analysis Queries SQL File 14*
Limit to 1000 rows
quote_date DATE,
final_premium DECIMAL(10,2),
status VARCHAR(10) CHECK (status IN ('active', 'inactive')),
FOREIGN KEY (user_id) REFERENCES user_personal_info(user_id),
FOREIGN KEY (config_id) REFERENCES product_config(config_id)
);
CREATE TABLE premium_config (
premium_id INT PRIMARY KEY,
config_id INT,
tax_rate DECIMAL(5,2),
surcharge DECIMAL(5,2),
FOREIGN KEY (config_id) REFERENCES product_config(config_id)
);
CREATE TABLE premium_summary (
summary_id INT PRIMARY KEY,
quote_id INT,
base_premium DECIMAL(10,2),
tax_amount DECIMAL(10,2),
total_premium DECIMAL(10,2),
FOREIGN KEY (quote_id) REFERENCES quote_info(quote_id)
);
CREATE TABLE lov_data (
lov_id INT PRIMARY KEY,
lov_type VARCHAR(100),
lov_value VARCHAR(100)
);
28°C
Mostly cloudy
Search
ENG
IN
12:51 AM
6/15/2025

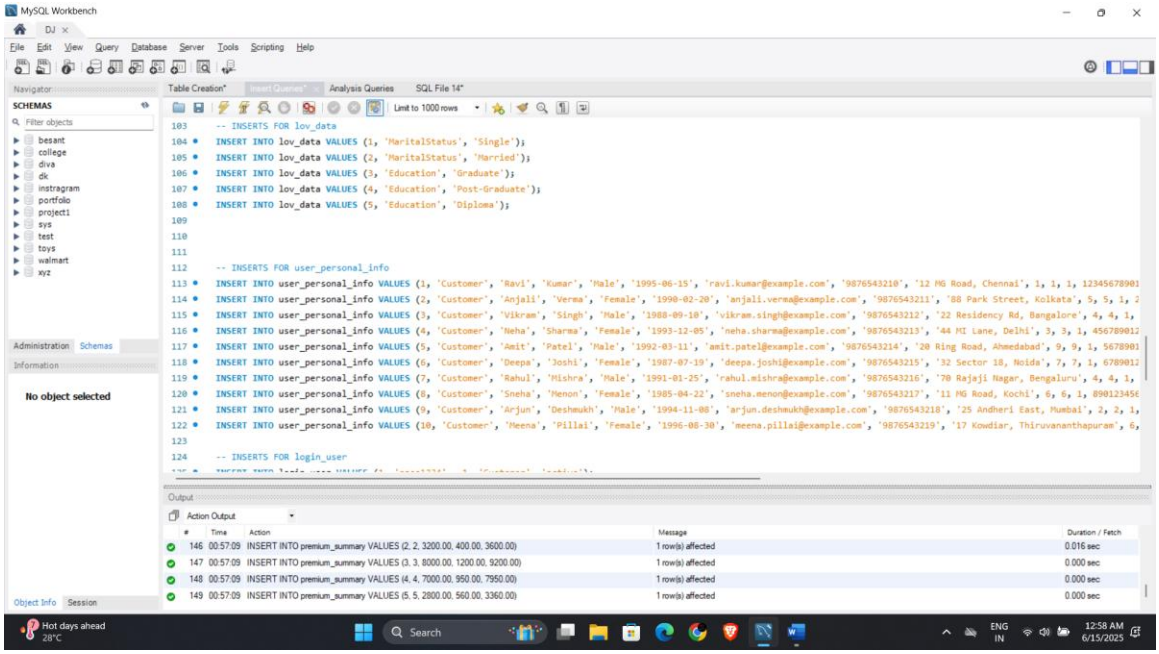
Insert Queries

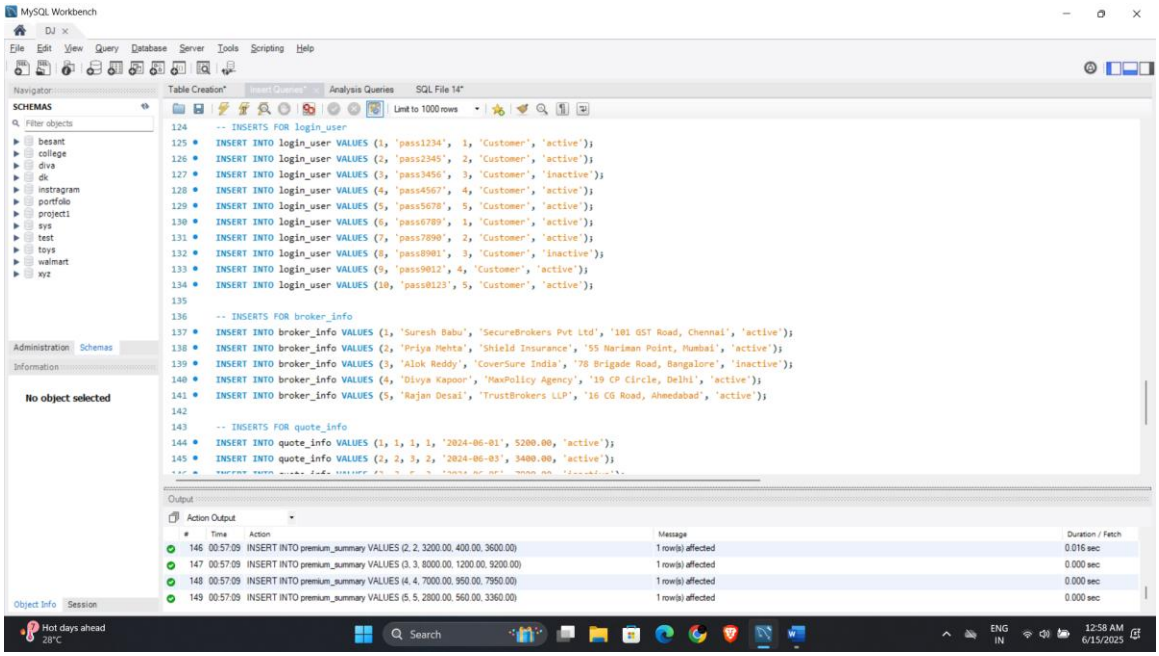


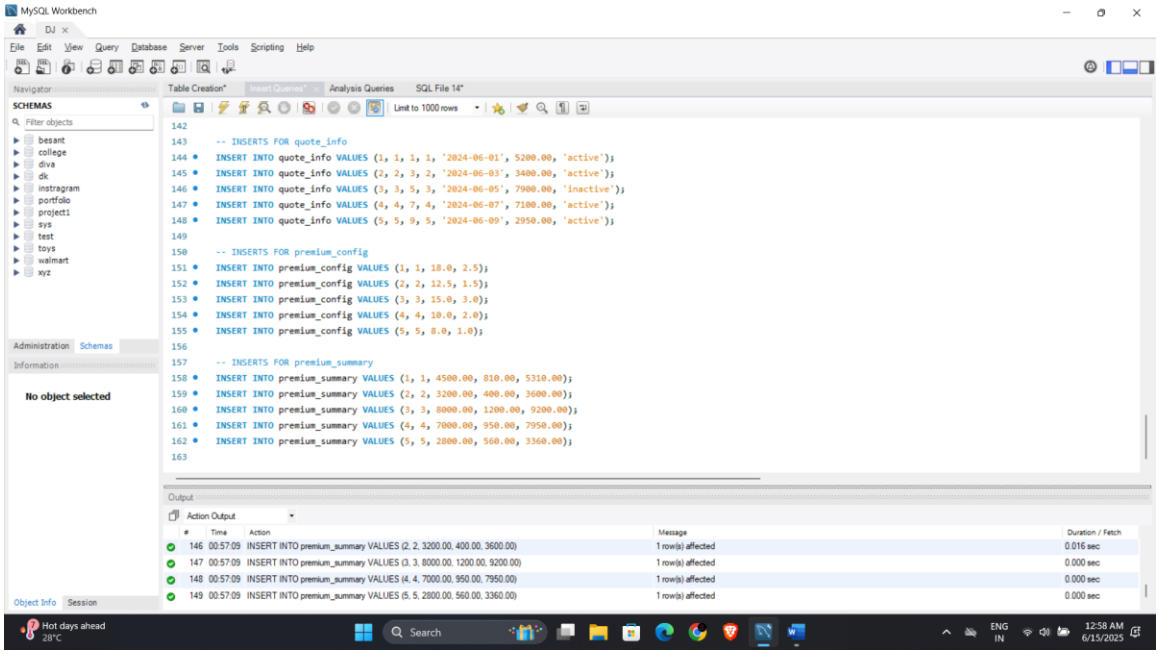



MySQL Workbench
DJ
File Edit View Query Database Server Tools Scripting Help
Navigator
SCHEMAS
Filter objects
besant
college
diva
dk
instragram
portfolio
project1
sys
test
toys
walmart
xyz
Administration Schemas
Information
No object selected
Object Info Session
Table Creation* Insert Queries* Analysis Queries SQL File 14*
Limit to 1000 rows
58 -- INSERTS FOR city
59 INSERT INTO city VALUES (1, 'Chennai', 1);
60 INSERT INTO city VALUES (2, 'Mumbai', 2);
61 INSERT INTO city VALUES (3, 'Delhi', 3);
62 INSERT INTO city VALUES (4, 'Bangalore', 4);
63 INSERT INTO city VALUES (5, 'Kolkata', 5);
64 INSERT INTO city VALUES (6, 'Kochi', 6);
65 INSERT INTO city VALUES (7, 'Lucknow', 7);
66 INSERT INTO city VALUES (8, 'Patna', 8);
67 INSERT INTO city VALUES (9, 'Ahmedabad', 9);
68 INSERT INTO city VALUES (10, 'Jaipur', 10);
69 INSERT INTO city VALUES (11, 'Amritsar', 11);
70 INSERT INTO city VALUES (12, 'Gurgaon', 12);
71 INSERT INTO city VALUES (13, 'Vijayawada', 13);
72 INSERT INTO city VALUES (14, 'Bhubaneswar', 14);
73
74
75 -- INSERTS FOR vehicle_color
76 INSERT INTO vehicle_color VALUES (1, 'Red');
77 INSERT INTO vehicle_color VALUES (2, 'Blue');
78 INSERT INTO vehicle_color VALUES (3, 'Green');
79 INSERT INTO vehicle_color VALUES (4, 'Black');
Output
Action Output
Time Action Message Duration / Fetch
146 00:57:09 INSERT INTO premium_summary VALUES (2, 2, 3200.00, 400.00, 3600.00) 1 row(s) affected 0.016 sec
147 00:57:09 INSERT INTO premium_summary VALUES (3, 3, 8000.00, 1200.00, 9200.00) 1 row(s) affected 0.000 sec
148 00:57:09 INSERT INTO premium_summary VALUES (4, 4, 7000.00, 950.00, 7950.00) 1 row(s) affected 0.000 sec
149 00:57:09 INSERT INTO premium_summary VALUES (5, 5, 2800.00, 560.00, 3360.00) 1 row(s) affected 0.000 sec
Hot days ahead
28°C
Search
ENG
IN
12:58 AM
6/15/2025


MySQL Workbench
DJ
File Edit View Query Database Server Tools Scripting Help
Navigator
SCHEMAS
Filter objects
besant
college
diva
dk
instragram
portfolio
project1
sys
test
toys
walmart
xyz
Administration Schemas
Information
No object selected
Object Info Session
Table Creation* Insert Queries* Analysis Queries SQL File 14*
Limit to 1000 rows
82 -- INSERTS FOR vehicle_body
83 INSERT INTO vehicle_body VALUES (1, 'Sedan');
84 INSERT INTO vehicle_body VALUES (2, 'SUV');
85 INSERT INTO vehicle_body VALUES (3, 'Hatchback');
86 INSERT INTO vehicle_body VALUES (4, 'Convertible');
87 INSERT INTO vehicle_body VALUES (5, 'Coupe');
88
89 -- INSERTS FOR vehicle_category
90 INSERT INTO vehicle_category VALUES (1, 'Private');
91 INSERT INTO vehicle_category VALUES (2, 'Commercial');
92 INSERT INTO vehicle_category VALUES (3, 'Luxury');
93 INSERT INTO vehicle_category VALUES (4, 'Transport');
94 INSERT INTO vehicle_category VALUES (5, 'Tourist');
95
96 -- INSERTS FOR product_config
97 INSERT INTO product_config VALUES (1, 'Standard Plan', 'Comprehensive', 4500.00);
98 INSERT INTO product_config VALUES (2, 'Economy Plan', 'TPL', 3200.00);
99 INSERT INTO product_config VALUES (3, 'Premium Plan', 'Both', 8000.00);
100 INSERT INTO product_config VALUES (4, 'Urban Plus', 'Comprehensive', 7000.00);
101 INSERT INTO product_config VALUES (5, 'Rural Saver', 'TPL', 2800.00);
102
103 -- INSERTS FOR lov_data
Output
Action Output
Time Action Message Duration / Fetch
146 00:57:09 INSERT INTO premium_summary VALUES (2, 2, 3200.00, 400.00, 3600.00) 1 row(s) affected 0.016 sec
147 00:57:09 INSERT INTO premium_summary VALUES (3, 3, 8000.00, 1200.00, 9200.00) 1 row(s) affected 0.000 sec
148 00:57:09 INSERT INTO premium_summary VALUES (4, 4, 7000.00, 950.00, 7950.00) 1 row(s) affected 0.000 sec
149 00:57:09 INSERT INTO premium_summary VALUES (5, 5, 2800.00, 560.00, 3360.00) 1 row(s) affected 0.000 sec
Hot days ahead
28°C
Search
ENG
IN
12:58 AM
6/15/2025

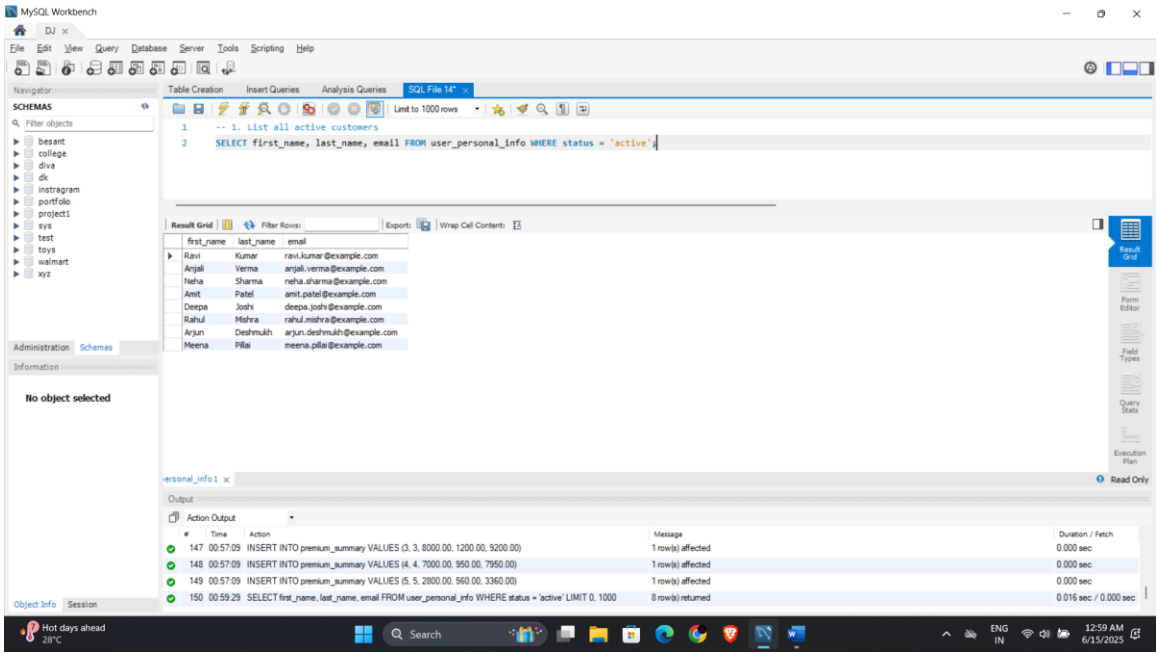

MySQL Workbench
DJ
File Edit View Query Database Server Tools Scripting Help
Navigator
SCHEMAS
Filter objects
besant
college
diva
dk
instragram
portfolio
project1
sys
test
toys
walmart
xyz
Administration Schemas
Information
No object selected
Object Info Session
Table Creation*
Insert Queries*
Analysis Queries
SQL File 14*
Limit to 1000 rows
103 -- INSERTS FOR lov_data
104 INSERT INTO lov_data VALUES (1, 'MaritalStatus', 'Single');
105 INSERT INTO lov_data VALUES (2, 'MaritalStatus', 'Married');
106 INSERT INTO lov_data VALUES (3, 'Education', 'Graduate');
107 INSERT INTO lov_data VALUES (4, 'Education', 'Post-Graduate');
108 INSERT INTO lov_data VALUES (5, 'Education', 'Diploma');
112 -- INSERTS FOR user_personal_info
113 INSERT INTO user_personal_info VALUES (1, 'Customer', 'Ravi', 'Kumar', 'Male', '1995-06-15', 'ravi.kumar@example.com', '9876543210', '12 MG Road, Chennai', 1, 1, 1, 12345678901
114 INSERT INTO user_personal_info VALUES (2, 'Customer', 'Anjali', 'Verma', 'Female', '1990-02-20', 'anjali.verma@example.com', '9876543211', '88 Park Street, Kolkata', 5, 5, 1, 2
115 INSERT INTO user_personal_info VALUES (3, 'Customer', 'Vikram', 'Singh', 'Male', '1988-09-10', 'vikram.singh@example.com', '9876543212', '22 Residency Rd, Bangalore', 4, 4, 1,
116 INSERT INTO user_personal_info VALUES (4, 'Customer', 'Neha', 'Sharma', 'Female', '1993-12-05', 'neha.sharma@example.com', '9876543213', '44 MI Lane, Delhi', 3, 3, 1, 456789012
117 INSERT INTO user_personal_info VALUES (5, 'Customer', 'Amit', 'Patel', 'Male', '1992-03-11', 'amit.patel@example.com', '9876543214', '20 Ring Road, Ahmedabad', 9, 9, 1, 5678901
118 INSERT INTO user_personal_info VALUES (6, 'Customer', 'Deepa', 'Joshi', 'Female', '1987-07-19', 'deepa.joshi@example.com', '9876543215', '32 Sector 18, Noida', 7, 7, 1, 6789012
119 INSERT INTO user_personal_info VALUES (7, 'Customer', 'Rahul', 'Mishra', 'Male', '1991-01-25', 'rahul.mishra@example.com', '9876543216', '70 Rajaji Nagar, Bengaluru', 4, 4, 1,
120 INSERT INTO user_personal_info VALUES (8, 'Customer', 'Sneha', 'Menon', 'Female', '1985-04-22', 'sneha.menon@example.com', '9876543217', '11 MG Road, Kochi', 6, 6, 1, 890123456
121 INSERT INTO user_personal_info VALUES (9, 'Customer', 'Arjun', 'Deshmukh', 'Male', '1994-11-08', 'arjun.deshmukh@example.com', '9876543218', '25 Andheri East, Mumbai', 2, 2, 1,
122 INSERT INTO user_personal_info VALUES (10, 'Customer', 'Meena', 'Pillai', 'Female', '1996-08-30', 'meena.pillai@example.com', '9876543219', '17 Kowdiar, Thiruvananthapuram', 6,
123
124 -- INSERTS FOR login_user
Output
Action Output
Time Action Message Duration / Fetch
146 00:57:09 INSERT INTO premium_summary VALUES (2, 2, 3200.00, 400.00, 3600.00) 1 row(s) affected 0.016 sec
147 00:57:09 INSERT INTO premium_summary VALUES (3, 3, 8000.00, 1200.00, 9200.00) 1 row(s) affected 0.000 sec
148 00:57:09 INSERT INTO premium_summary VALUES (4, 4, 7000.00, 950.00, 7950.00) 1 row(s) affected 0.000 sec
149 00:57:09 INSERT INTO premium_summary VALUES (5, 5, 2800.00, 560.00, 3360.00) 1 row(s) affected 0.000 sec
Hot days ahead
28°C
Search
ENG
IN
12:58 AM
6/15/2025


MySQL Workbench
DJ
File Edit View Query Database Server Tools Scripting Help
Navigator
SCHEMAS
Filter objects
besant
college
diva
dk
instragram
portfolio
project1
sys
test
toys
walmart
xyz
Administration Schemas
Information
No object selected
Object Info Session
Table Creation*
Insert Queries*
Analysis Queries
SQL File 14*
Limit to 1000 rows
124 -- INSERTS FOR login_user
125 INSERT INTO login_user VALUES (1, 'pass1234', 1, 'Customer', 'active');
126 INSERT INTO login_user VALUES (2, 'pass2345', 2, 'Customer', 'active');
127 INSERT INTO login_user VALUES (3, 'pass3456', 3, 'Customer', 'inactive');
128 INSERT INTO login_user VALUES (4, 'pass4567', 4, 'Customer', 'active');
129 INSERT INTO login_user VALUES (5, 'pass5678', 5, 'Customer', 'active');
130 INSERT INTO login_user VALUES (6, 'pass6789', 1, 'Customer', 'active');
131 INSERT INTO login_user VALUES (7, 'pass7890', 2, 'Customer', 'active');
132 INSERT INTO login_user VALUES (8, 'pass8901', 3, 'Customer', 'inactive');
133 INSERT INTO login_user VALUES (9, 'pass9012', 4, 'Customer', 'active');
134 INSERT INTO login_user VALUES (10, 'pass0123', 5, 'Customer', 'active');
135
136 -- INSERTS FOR broker_info
137 INSERT INTO broker_info VALUES (1, 'Suresh Babu', 'SecureBrokers Pvt Ltd', '101 GST Road, Chennai', 'active');
138 INSERT INTO broker_info VALUES (2, 'Priya Mehta', 'Shield Insurance', '55 Nariman Point, Mumbai', 'active');
139 INSERT INTO broker_info VALUES (3, 'Alok Reddy', 'CoverSure India', '78 Brigade Road, Bangalore', 'inactive');
140 INSERT INTO broker_info VALUES (4, 'Divya Kapoor', 'MaxPolicy Agency', '19 CP Circle, Delhi', 'active');
141 INSERT INTO broker_info VALUES (5, 'Rajan Desai', 'TrustBrokers LLP', '16 CG Road, Ahmedabad', 'active');
142
143 -- INSERTS FOR quote_info
144 INSERT INTO quote_info VALUES (1, 1, 1, 1, '2024-06-01', 5200.00, 'active');
145 INSERT INTO quote_info VALUES (2, 2, 3, 2, '2024-06-03', 3400.00, 'active');
Output
Action Output
Time Action Message Duration / Fetch
146 00:57:09 INSERT INTO premium_summary VALUES (2, 2, 3200.00, 400.00, 3600.00) 1 row(s) affected 0.016 sec
147 00:57:09 INSERT INTO premium_summary VALUES (3, 3, 8000.00, 1200.00, 9200.00) 1 row(s) affected 0.000 sec
148 00:57:09 INSERT INTO premium_summary VALUES (4, 4, 7000.00, 950.00, 7950.00) 1 row(s) affected 0.000 sec
149 00:57:09 INSERT INTO premium_summary VALUES (5, 5, 2800.00, 560.00, 3360.00) 1 row(s) affected 0.000 sec
Hot days ahead
28°C
Search
ENG
IN
12:58 AM
6/15/2025

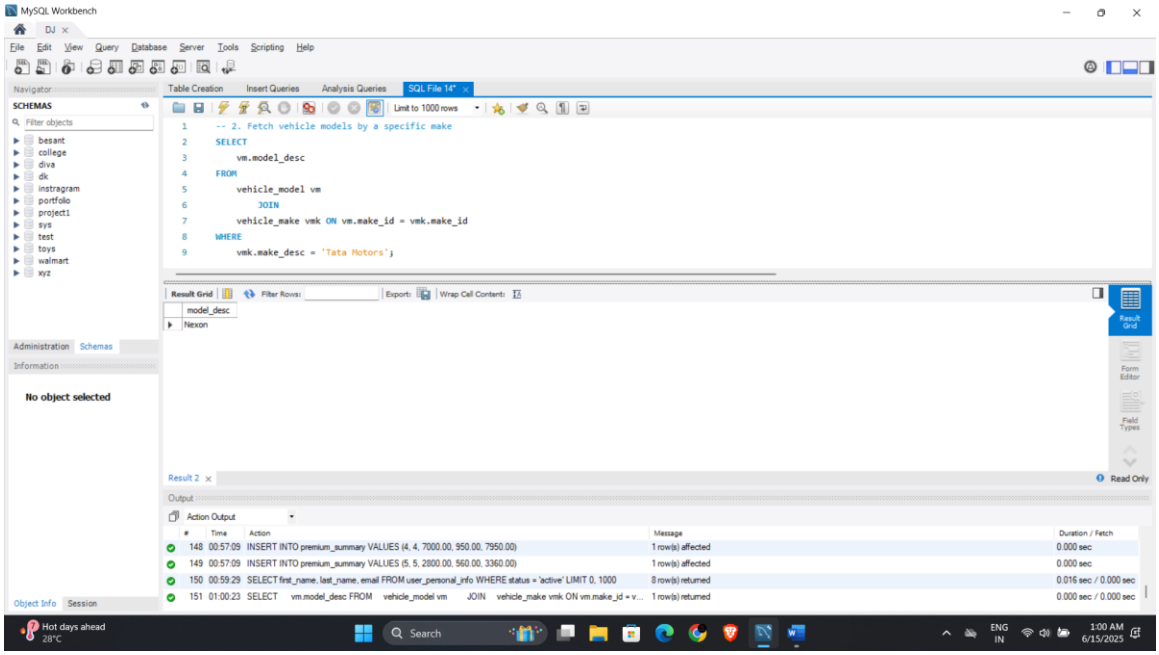


5. SQL Queries & Insights

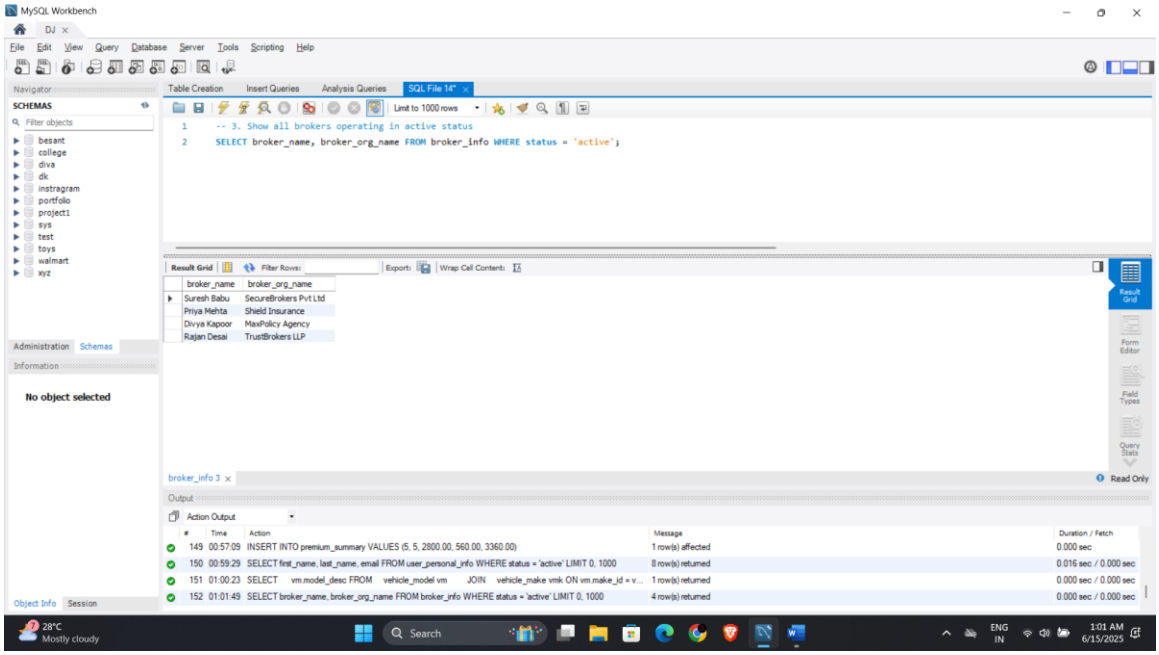
List of All Active Customers



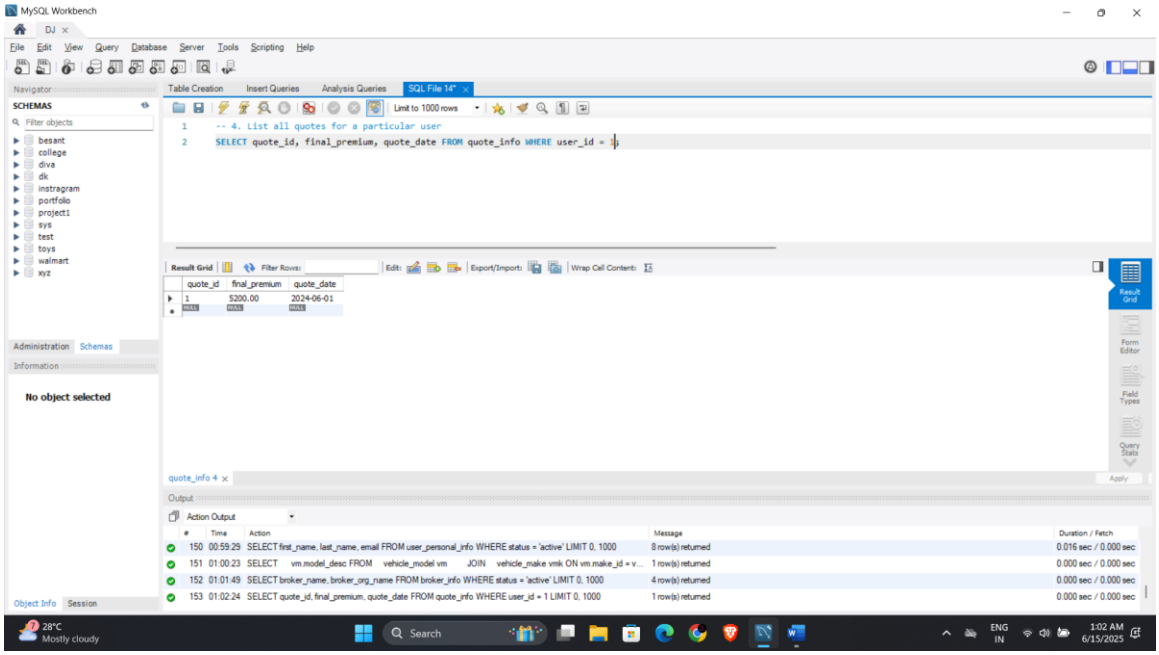
Vehicle Models by a Specific Make



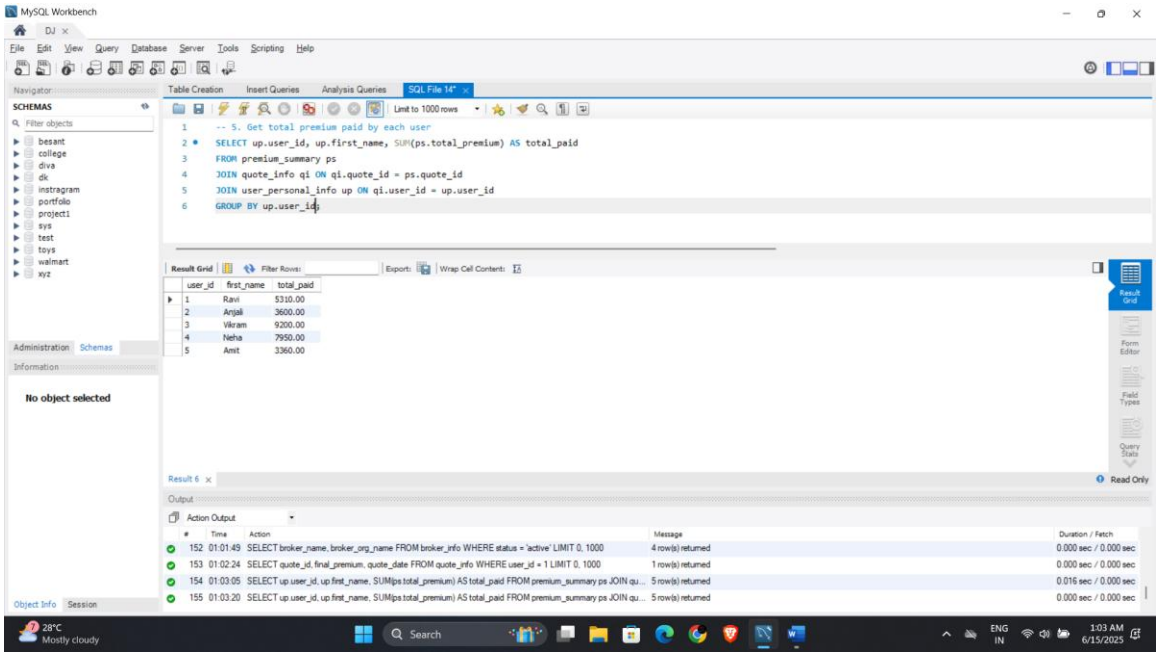
Active Brokers



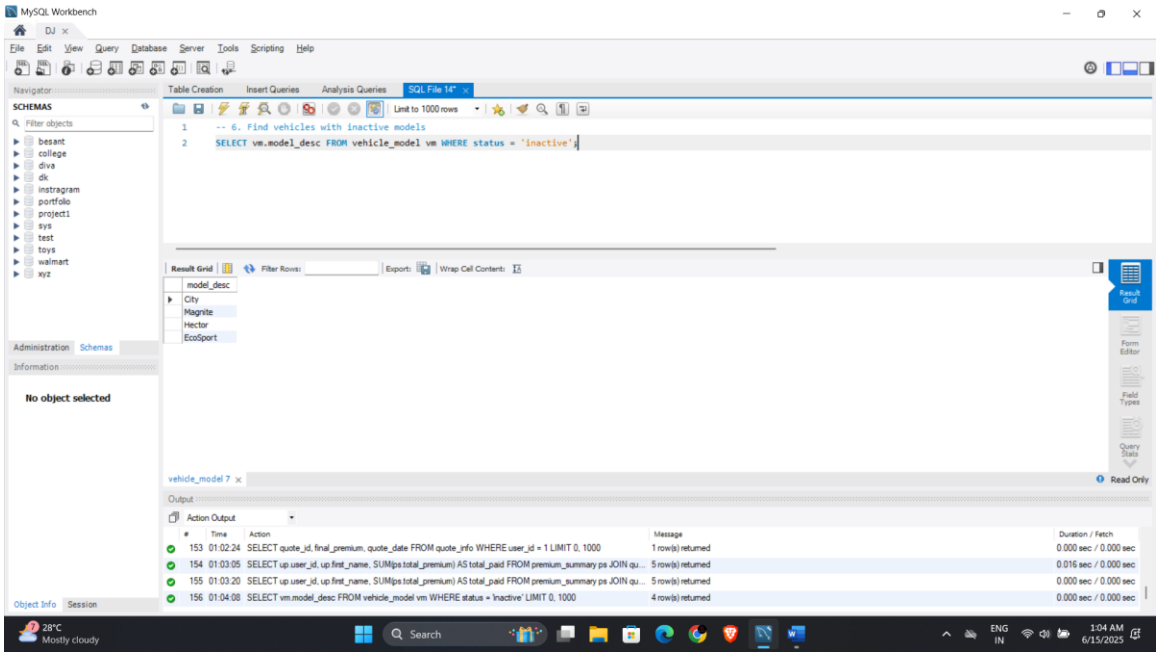
Quotes for a Specific User



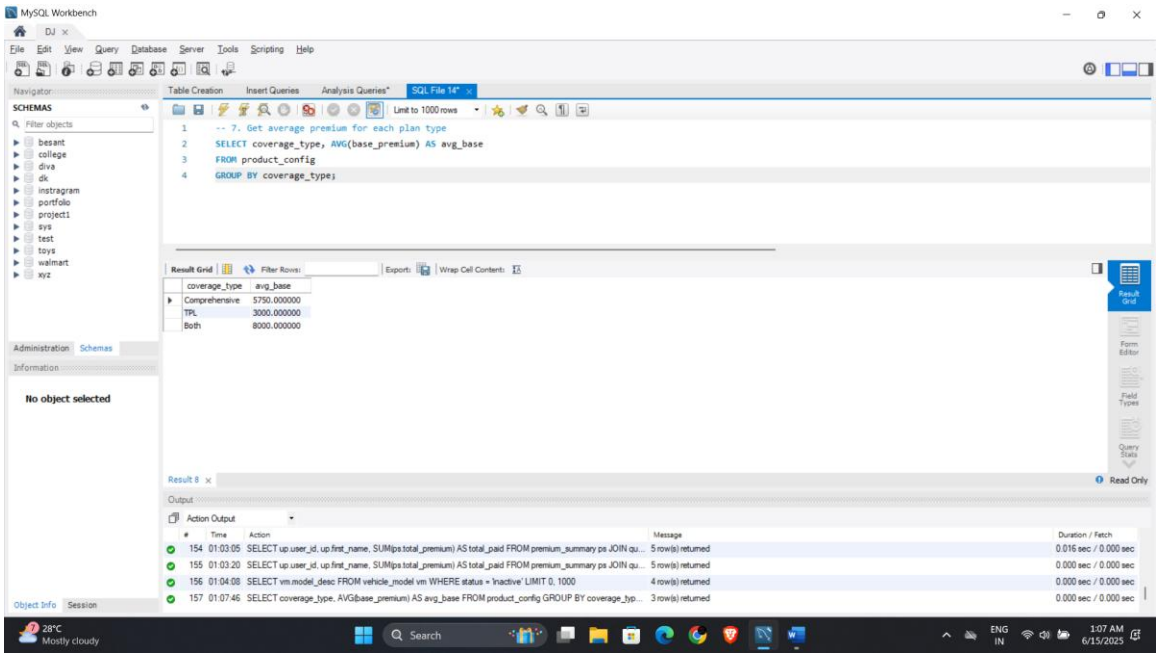
Total Premium Paid by Each User



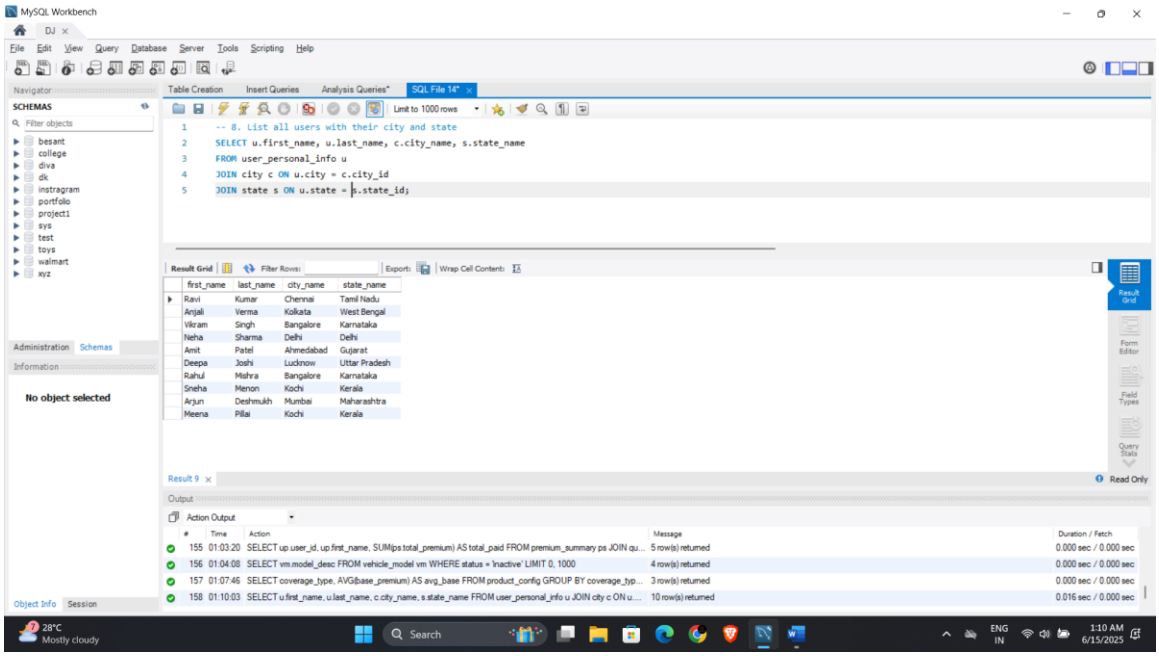
Inactive Vehicle Models



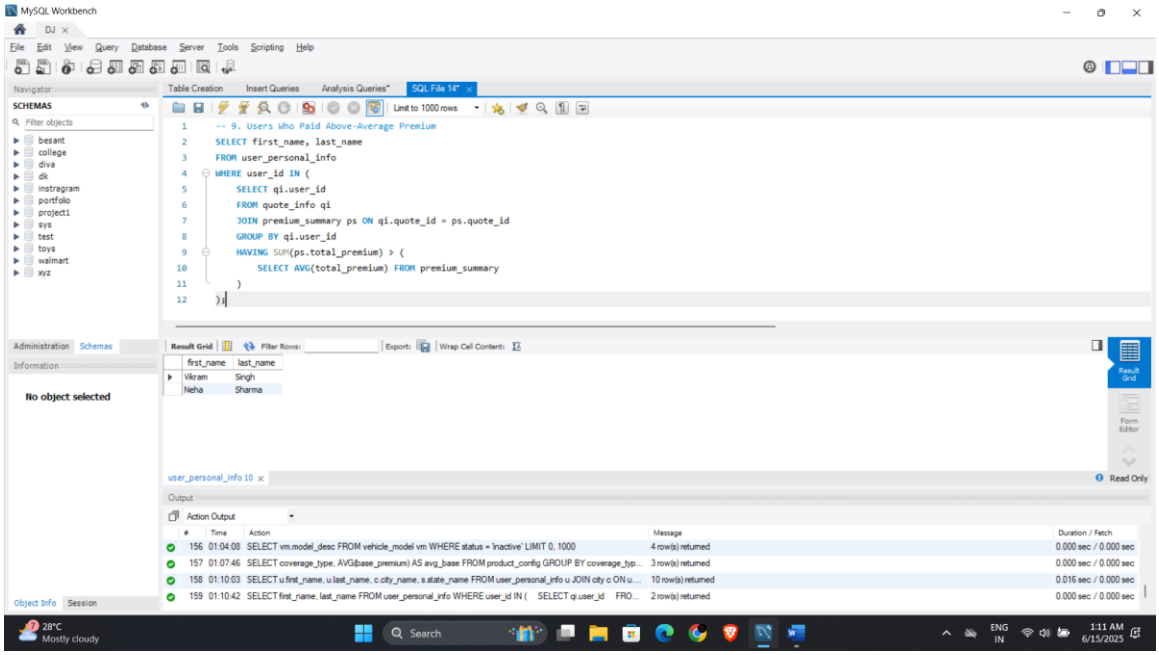
Average Premium per Coverage Type



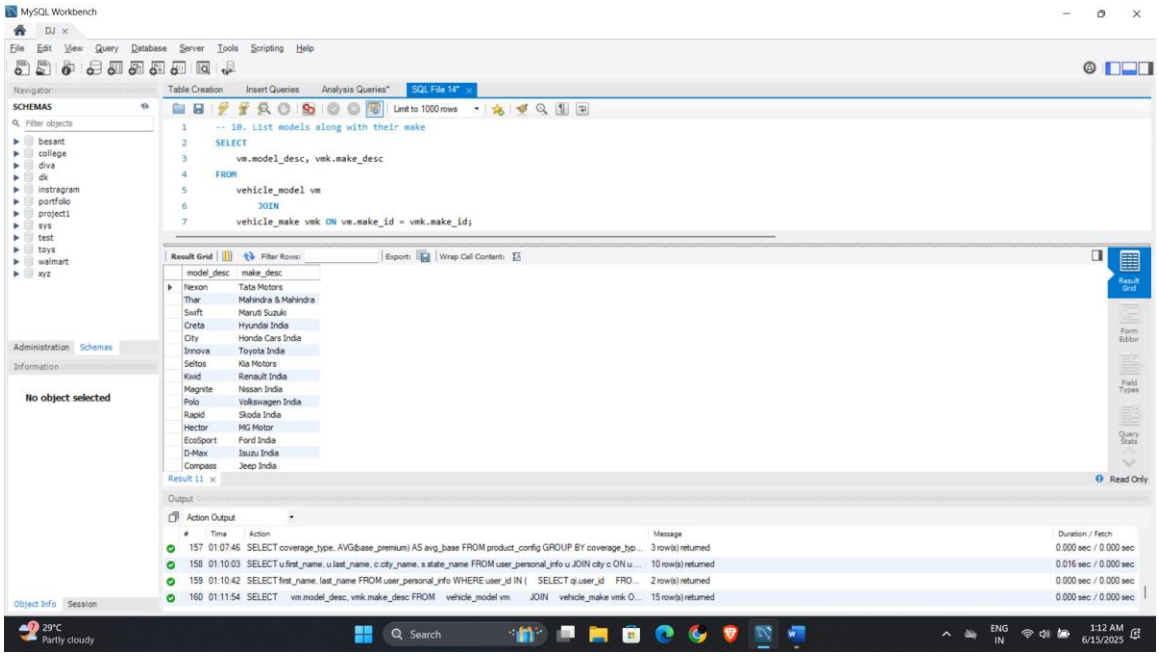
Users with Their City and State



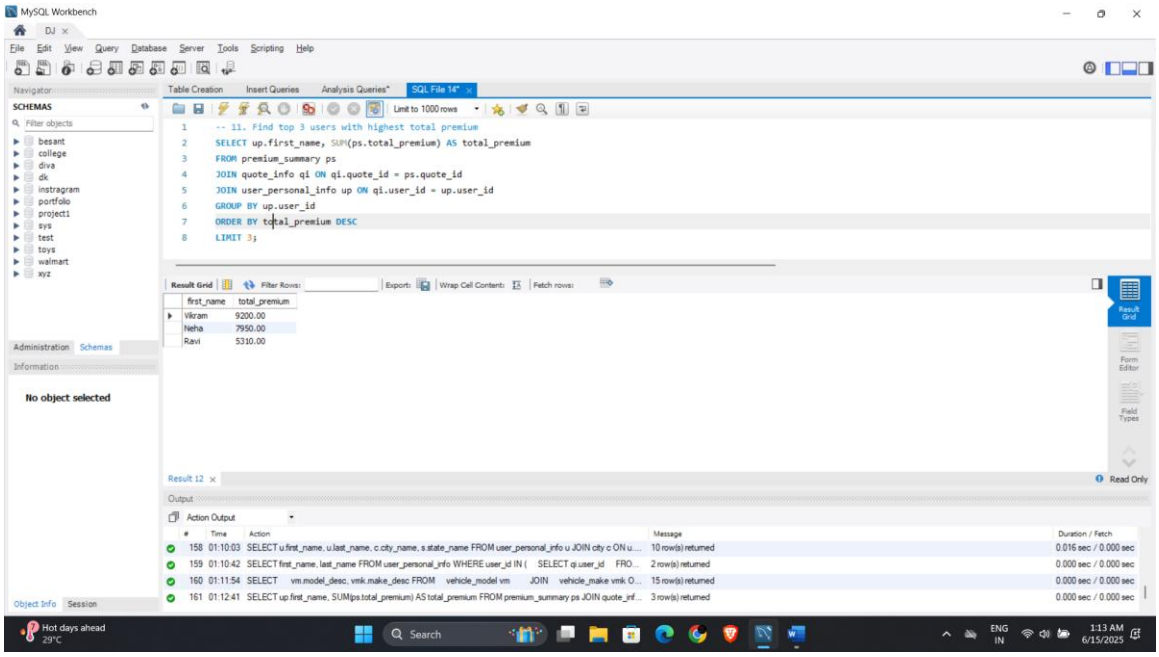
Users Who Paid Above-Average Premium



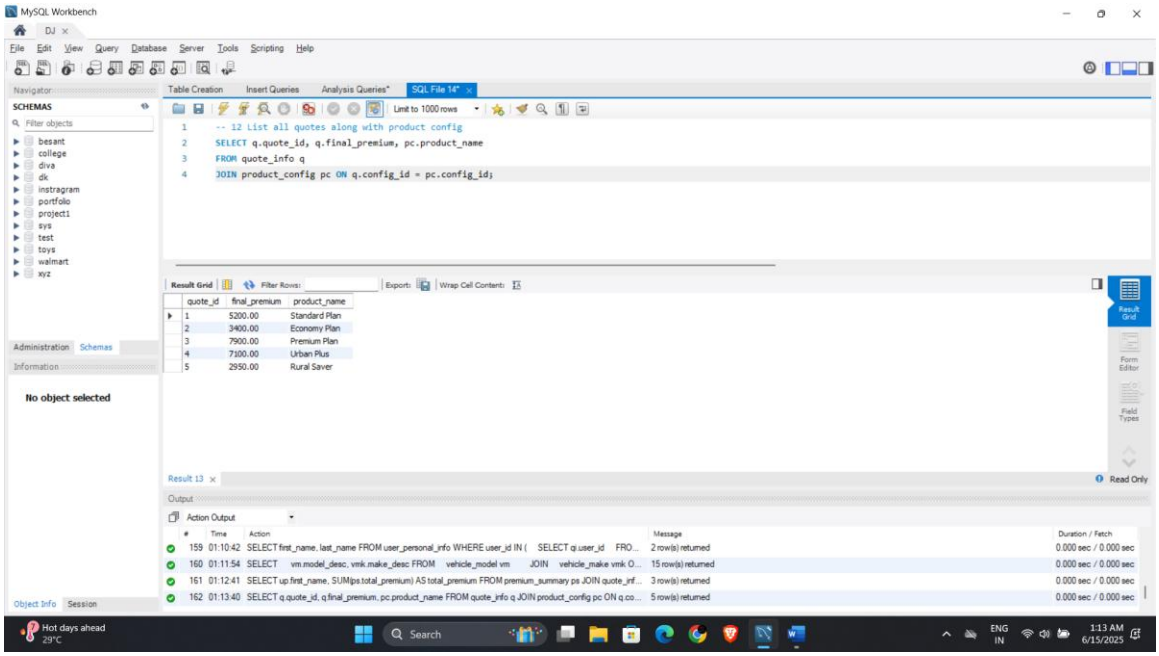
Model and Make Combinations



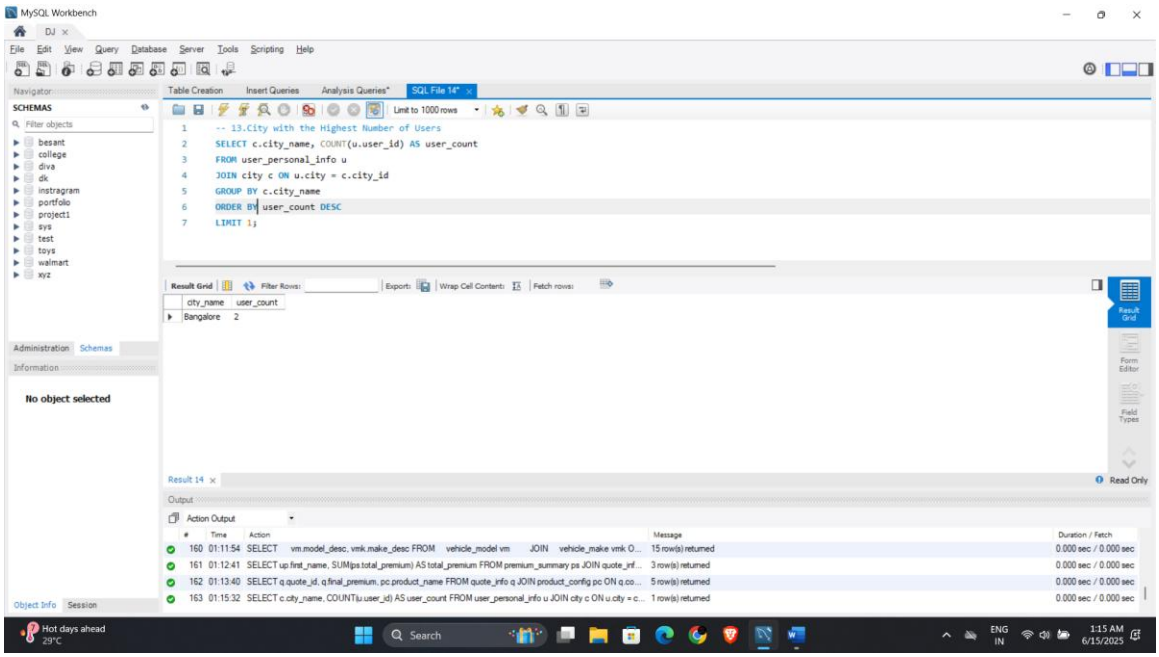
Top 3 Users with Highest Premium



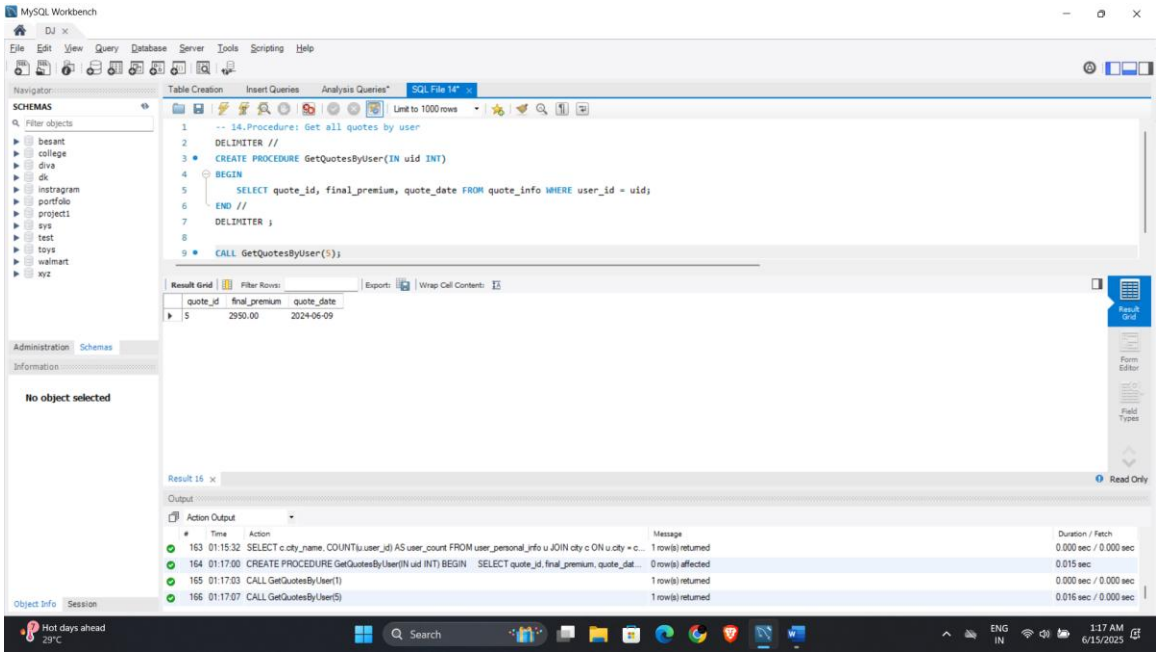
Quotes with Final Premium



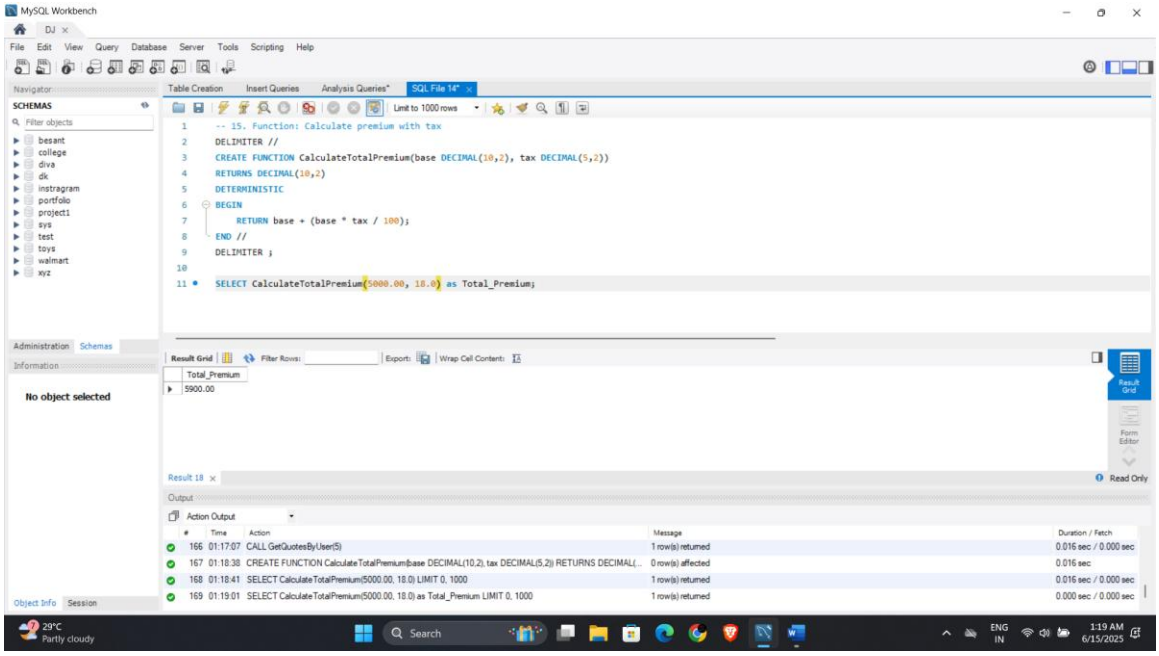
City with the Highest Number of Users



Procedure: Get quotes by user id



Function: Calculate premium with tax



6. Conclusion

This SQL project demonstrates the creation and analysis of a comprehensive vehicle insurance database. It showcases schema design, data population, and analytical querying to derive valuable insights.

7. Appendix

Table Creation

```
CREATE DATABASE insurance;

use insurance;


CREATE TABLE vehicle_make (
   make_id INT PRIMARY KEY,
   make_desc VARCHAR(100) NOT NULL,
   status VARCHAR(10) CHECK (status IN ('active', 'inactive'))
);


CREATE TABLE vehicle_model (
   model_id INT PRIMARY KEY,
   model_desc VARCHAR(100) NOT NULL,
   make_id INT,
   status VARCHAR(10) CHECK (status IN ('active', 'inactive')),
   FOREIGN KEY (make_id) REFERENCES vehicle_make(make_id)
);


CREATE TABLE region (
   region_id INT PRIMARY KEY,
```

```
    region_name VARCHAR(100)
);


CREATE TABLE state (
    state_id INT PRIMARY KEY,
    state_name VARCHAR(100),
    region_id INT,
    FOREIGN KEY (region_id) REFERENCES region(region_id)
);

CREATE TABLE city (
    city_id INT PRIMARY KEY,
    city_name VARCHAR(100),
    state_id INT,
    FOREIGN KEY (state_id) REFERENCES state(state_id)
);

CREATE TABLE vehicle_color (
    color_id INT PRIMARY KEY,
    color_name VARCHAR(50)
);
```

```
CREATE TABLE vehicle_body (
   body_id INT PRIMARY KEY,
   body_type VARCHAR(50)
);

CREATE TABLE vehicle_category (
   category_id INT PRIMARY KEY,
   category_type VARCHAR(50)
);

CREATE TABLE product_config (
   config_id INT PRIMARY KEY,
   product_name VARCHAR(100),
   coverage_type VARCHAR(20) CHECK (coverage_type IN ('Comprehensive', 'TPL',
'Both')),
   base_premium DECIMAL(10,2)
);

CREATE TABLE user_personal_info (
   user_id INT PRIMARY KEY,
   usertype VARCHAR(50),
   first_name VARCHAR(50),
   last_name VARCHAR(50),
   gender VARCHAR(10),
   dob DATE NOT NULL,
```

```
    email VARCHAR(100) NOT NULL,
    phone VARCHAR(20) NOT NULL,
    addr1 VARCHAR(100),
    city INT,
    state INT,
    country INT,
    national_id BIGINT NOT NULL,
    nationality INT NOT NULL,
    status VARCHAR(10) CHECK (status IN ('active', 'inactive'))
);

CREATE TABLE login_user (
    login_id INT PRIMARY KEY,
    password VARCHAR(255),
    user_id INT,
    usertype VARCHAR(50) NOT NULL,
    status VARCHAR(10) CHECK (status IN ('active', 'inactive')),
    FOREIGN KEY (user_id) REFERENCES user_personal_info(user_id)
);

CREATE TABLE broker_info (
    broker_id INT PRIMARY KEY,
    broker_name VARCHAR(100),
    broker_org_name VARCHAR(100),
    address VARCHAR(150),
```

```
    status VARCHAR(10) CHECK (status IN ('active', 'inactive'))
);

CREATE TABLE quote_info (
    quote_id INT PRIMARY KEY,
    user_id INT,
    vehicle_id INT,
    config_id INT,
    quote_date DATE,
    final_premium DECIMAL(10,2),
    status VARCHAR(10) CHECK (status IN ('active', 'inactive')),
    FOREIGN KEY (user_id) REFERENCES user_personal_info(user_id),
    FOREIGN KEY (config_id) REFERENCES product_config(config_id)
);

CREATE TABLE premium_config (
    premium_id INT PRIMARY KEY,
    config_id INT,
    tax_rate DECIMAL(5,2),
    surcharge DECIMAL(5,2),
    FOREIGN KEY (config_id) REFERENCES product_config(config_id)
);

CREATE TABLE premium_summary (
    summary_id INT PRIMARY KEY,
```

```
    quote_id INT,
    base_premium DECIMAL(10,2),
    tax_amount DECIMAL(10,2),
    total_premium DECIMAL(10,2),
    FOREIGN KEY (quote_id) REFERENCES quote_info(quote_id)
);

CREATE TABLE lov_data (
    lov_id INT PRIMARY KEY,
    lov_type VARCHAR(100),
    lov_value VARCHAR(100)
);
```

Insert Queries

```
-- INSERTS FOR vehicle_make
INSERT INTO vehicle_make VALUES (1, 'Tata Motors', 'active');
INSERT INTO vehicle_make VALUES (2, 'Mahindra & Mahindra', 'active');
INSERT INTO vehicle_make VALUES (3, 'Maruti Suzuki', 'active');
INSERT INTO vehicle_make VALUES (4, 'Hyundai India', 'active');
INSERT INTO vehicle_make VALUES (5, 'Honda Cars India', 'inactive');
INSERT INTO vehicle_make VALUES (6, 'Toyota India', 'active');
INSERT INTO vehicle_make VALUES (7, 'Kia Motors', 'active');
INSERT INTO vehicle_make VALUES (8, 'Renault India', 'inactive');
INSERT INTO vehicle_make VALUES (9, 'Nissan India', 'active');
```

```
INSERT INTO vehicle_make VALUES (10, 'Volkswagen India', 'inactive');
INSERT INTO vehicle_make VALUES (11, 'Skoda India', 'active');
INSERT INTO vehicle_make VALUES (12, 'MG Motor', 'active');
INSERT INTO vehicle_make VALUES (13, 'Ford India', 'inactive');
INSERT INTO vehicle_make VALUES (14, 'Isuzu India', 'active');
INSERT INTO vehicle_make VALUES (15, 'Jeep India', 'active');

-- INSERTS FOR vehicle_model
INSERT INTO vehicle_model VALUES (1, 'Nexon', 1, 'active');
INSERT INTO vehicle_model VALUES (2, 'Thar', 2, 'active');
INSERT INTO vehicle_model VALUES (3, 'Swift', 3, 'active');
INSERT INTO vehicle_model VALUES (4, 'Creta', 4, 'active');
INSERT INTO vehicle_model VALUES (5, 'City', 5, 'inactive');
INSERT INTO vehicle_model VALUES (6, 'Innova', 6, 'active');
INSERT INTO vehicle_model VALUES (7, 'Seltos', 7, 'active');
INSERT INTO vehicle_model VALUES (8, 'Kwid', 8, 'active');
INSERT INTO vehicle_model VALUES (9, 'Magnite', 9, 'inactive');
INSERT INTO vehicle_model VALUES (10, 'Polo', 10, 'active');
INSERT INTO vehicle_model VALUES (11, 'Rapid', 11, 'active');
INSERT INTO vehicle_model VALUES (12, 'Hector', 12, 'inactive');
INSERT INTO vehicle_model VALUES (13, 'EcoSport', 13, 'inactive');
INSERT INTO vehicle_model VALUES (14, 'D-Max', 14, 'active');
INSERT INTO vehicle_model VALUES (15, 'Compass', 15, 'active');

-- INSERTS FOR region
```

```
INSERT INTO region VALUES (1, 'North');
INSERT INTO region VALUES (2, 'South');
INSERT INTO region VALUES (3, 'East');
INSERT INTO region VALUES (4, 'West');


-- INSERTS FOR state
INSERT INTO state VALUES (1, 'Tamil Nadu', 2);
INSERT INTO state VALUES (2, 'Maharashtra', 4);
INSERT INTO state VALUES (3, 'Delhi', 1);
INSERT INTO state VALUES (4, 'Karnataka', 2);
INSERT INTO state VALUES (5, 'West Bengal', 3);
INSERT INTO state VALUES (6, 'Kerala', 2);
INSERT INTO state VALUES (7, 'Uttar Pradesh', 1);
INSERT INTO state VALUES (8, 'Bihar', 3);
INSERT INTO state VALUES (9, 'Gujarat', 4);
INSERT INTO state VALUES (10, 'Rajasthan', 1);
INSERT INTO state VALUES (11, 'Punjab', 1);
INSERT INTO state VALUES (12, 'Haryana', 1);
INSERT INTO state VALUES (13, 'Andhra Pradesh', 2);
INSERT INTO state VALUES (14, 'Odisha', 3);

-- INSERTS FOR city
INSERT INTO city VALUES (1, 'Chennai', 1);
INSERT INTO city VALUES (2, 'Mumbai', 2);
```

```
INSERT INTO city VALUES (3, 'Delhi', 3);
INSERT INTO city VALUES (4, 'Bangalore', 4);
INSERT INTO city VALUES (5, 'Kolkata', 5);
INSERT INTO city VALUES (6, 'Kochi', 6);
INSERT INTO city VALUES (7, 'Lucknow', 7);
INSERT INTO city VALUES (8, 'Patna', 8);
INSERT INTO city VALUES (9, 'Ahmedabad', 9);
INSERT INTO city VALUES (10, 'Jaipur', 10);
INSERT INTO city VALUES (11, 'Amritsar', 11);
INSERT INTO city VALUES (12, 'Gurgaon', 12);
INSERT INTO city VALUES (13, 'Vijayawada', 13);
INSERT INTO city VALUES (14, 'Bhubaneswar', 14);


-- INSERTS FOR vehicle_color
INSERT INTO vehicle_color VALUES (1, 'Red');
INSERT INTO vehicle_color VALUES (2, 'Blue');
INSERT INTO vehicle_color VALUES (3, 'Green');
INSERT INTO vehicle_color VALUES (4, 'Black');
INSERT INTO vehicle_color VALUES (5, 'White');

-- INSERTS FOR vehicle_body
INSERT INTO vehicle_body VALUES (1, 'Sedan');
INSERT INTO vehicle_body VALUES (2, 'SUV');
INSERT INTO vehicle_body VALUES (3, 'Hatchback');
```

```
INSERT INTO vehicle_body VALUES (4, 'Convertible');

INSERT INTO vehicle_body VALUES (5, 'Coupe');


-- INSERTS FOR vehicle_category

INSERT INTO vehicle_category VALUES (1, 'Private');

INSERT INTO vehicle_category VALUES (2, 'Commercial');

INSERT INTO vehicle_category VALUES (3, 'Luxury');

INSERT INTO vehicle_category VALUES (4, 'Transport');

INSERT INTO vehicle_category VALUES (5, 'Tourist');


-- INSERTS FOR product_config

INSERT INTO product_config VALUES (1, 'Standard Plan', 'Comprehensive',
4500.00);

INSERT INTO product_config VALUES (2, 'Economy Plan', 'TPL', 3200.00);

INSERT INTO product_config VALUES (3, 'Premium Plan', 'Both', 8000.00);

INSERT INTO product_config VALUES (4, 'Urban Plus', 'Comprehensive', 7000.00);

INSERT INTO product_config VALUES (5, 'Rural Saver', 'TPL', 2800.00);


-- INSERTS FOR lov_data

INSERT INTO lov_data VALUES (1, 'MaritalStatus', 'Single');

INSERT INTO lov_data VALUES (2, 'MaritalStatus', 'Married');

INSERT INTO lov_data VALUES (3, 'Education', 'Graduate');

INSERT INTO lov_data VALUES (4, 'Education', 'Post-Graduate');

INSERT INTO lov_data VALUES (5, 'Education', 'Diploma');
```

-- INSERTS FOR user_personal_info

INSERT INTO user_personal_info VALUES (1, 'Customer', 'Ravi', 'Kumar', 'Male', '1995-06-15', 'ravi.kumar@example.com', '9876543210', '12 MG Road, Chennai', 1, 1, 1, 123456789012, 1, 'active');

INSERT INTO user_personal_info VALUES (2, 'Customer', 'Anjali', 'Verma', 'Female', '1990-02-20', 'anjali.verma@example.com', '9876543211', '88 Park Street, Kolkata', 5, 5, 1, 234567890123, 1, 'active');

INSERT INTO user_personal_info VALUES (3, 'Customer', 'Vikram', 'Singh', 'Male', '1988-09-10', 'vikram.singh@example.com', '9876543212', '22 Residency Rd, Bangalore', 4, 4, 1, 345678901234, 1, 'inactive');

INSERT INTO user_personal_info VALUES (4, 'Customer', 'Neha', 'Sharma', 'Female', '1993-12-05', 'neha.sharma@example.com', '9876543213', '44 MI Lane, Delhi', 3, 3, 1, 456789012345, 1, 'active');

INSERT INTO user_personal_info VALUES (5, 'Customer', 'Amit', 'Patel', 'Male', '1992-03-11', 'amit.patel@example.com', '9876543214', '20 Ring Road, Ahmedabad', 9, 9, 1, 567890123456, 1, 'active');

INSERT INTO user_personal_info VALUES (6, 'Customer', 'Deepa', 'Joshi', 'Female', '1987-07-19', 'deepa.joshi@example.com', '9876543215', '32 Sector 18, Noida', 7, 7, 1, 678901234567, 1, 'active');

INSERT INTO user_personal_info VALUES (7, 'Customer', 'Rahul', 'Mishra', 'Male', '1991-01-25', 'rahul.mishra@example.com', '9876543216', '70 Rajaji Nagar, Bengaluru', 4, 4, 1, 789012345678, 1, 'active');

INSERT INTO user_personal_info VALUES (8, 'Customer', 'Sneha', 'Menon', 'Female', '1985-04-22', 'sneha.menon@example.com', '9876543217', '11 MG Road, Kochi', 6, 6, 1, 890123456789, 1, 'inactive');

INSERT INTO user_personal_info VALUES (9, 'Customer', 'Arjun', 'Deshmukh', 'Male', '1994-11-08', 'arjun.deshmukh@example.com', '9876543218', '25 Andheri East, Mumbai', 2, 2, 1, 901234567890, 1, 'active');

```
INSERT INTO user_personal_info VALUES (10, 'Customer', 'Meena', 'Pillai', 'Female', '1996-08-30', 'meena.pillai@example.com', '9876543219', '17 Kowdiar, Thiruvananthapuram', 6, 6, 1, 912345678901, 1, 'active');


-- INSERTS FOR login_user

INSERT INTO login_user VALUES (1, 'pass1234',  1, 'Customer', 'active');

INSERT INTO login_user VALUES (2, 'pass2345',  2, 'Customer', 'active');

INSERT INTO login_user VALUES (3, 'pass3456',  3, 'Customer', 'inactive');

INSERT INTO login_user VALUES (4, 'pass4567',  4, 'Customer', 'active');

INSERT INTO login_user VALUES (5, 'pass5678',  5, 'Customer', 'active');

INSERT INTO login_user VALUES (6, 'pass6789',  1, 'Customer', 'active');

INSERT INTO login_user VALUES (7, 'pass7890',  2, 'Customer', 'active');

INSERT INTO login_user VALUES (8, 'pass8901',  3, 'Customer', 'inactive');

INSERT INTO login_user VALUES (9, 'pass9012', 4, 'Customer', 'active');

INSERT INTO login_user VALUES (10, 'pass0123', 5, 'Customer', 'active');


-- INSERTS FOR broker_info

INSERT INTO broker_info VALUES (1, 'Suresh Babu', 'SecureBrokers Pvt Ltd', '101 GST Road, Chennai', 'active');

INSERT INTO broker_info VALUES (2, 'Priya Mehta', 'Shield Insurance', '55 Nariman Point, Mumbai', 'active');

INSERT INTO broker_info VALUES (3, 'Alok Reddy', 'CoverSure India', '78 Brigade Road, Bangalore', 'inactive');

INSERT INTO broker_info VALUES (4, 'Divya Kapoor', 'MaxPolicy Agency', '19 CP Circle, Delhi', 'active');

INSERT INTO broker_info VALUES (5, 'Rajan Desai', 'TrustBrokers LLP', '16 CG Road, Ahmedabad', 'active');
```

```
-- INSERTS FOR quote_info
INSERT INTO quote_info VALUES (1, 1, 1, 1, '2024-06-01', 5200.00, 'active');
INSERT INTO quote_info VALUES (2, 2, 3, 2, '2024-06-03', 3400.00, 'active');
INSERT INTO quote_info VALUES (3, 3, 5, 3, '2024-06-05', 7900.00, 'inactive');
INSERT INTO quote_info VALUES (4, 4, 7, 4, '2024-06-07', 7100.00, 'active');
INSERT INTO quote_info VALUES (5, 5, 9, 5, '2024-06-09', 2950.00, 'active');

-- INSERTS FOR premium_config
INSERT INTO premium_config VALUES (1, 1, 18.0, 2.5);
INSERT INTO premium_config VALUES (2, 2, 12.5, 1.5);
INSERT INTO premium_config VALUES (3, 3, 15.0, 3.0);
INSERT INTO premium_config VALUES (4, 4, 10.0, 2.0);
INSERT INTO premium_config VALUES (5, 5, 8.0, 1.0);

-- INSERTS FOR premium_summary
INSERT INTO premium_summary VALUES (1, 1, 4500.00, 810.00, 5310.00);
INSERT INTO premium_summary VALUES (2, 2, 3200.00, 400.00, 3600.00);
INSERT INTO premium_summary VALUES (3, 3, 8000.00, 1200.00, 9200.00);
INSERT INTO premium_summary VALUES (4, 4, 7000.00, 950.00, 7950.00);
INSERT INTO premium_summary VALUES (5, 5, 2800.00, 560.00, 3360.00);
```

Analysis Queries

```
-- USE CASE QUERIES


-- 1. List all active customers

SELECT first_name, last_name, email FROM user_personal_info WHERE status =
'active';


-- 2. Fetch vehicle models by a specific make

SELECT vm.model_desc FROM vehicle_model vm JOIN vehicle_make vmk ON
vm.make_id = vmk.make_id WHERE vmk.make_desc = 'Tata Motors';


-- 3. Show all brokers operating in active status

SELECT broker_name, broker_org_name FROM broker_info WHERE status = 'active';


-- 4. List all quotes for a particular user

SELECT quote_id, final_premium, quote_date FROM quote_info WHERE user_id = 1;


-- 5. Get total premium paid by each user

SELECT up.user_id, up.first_name, SUM(ps.total_premium) AS total_paid

FROM premium_summary ps

JOIN quote_info qi ON qi.quote_id = ps.quote_id

JOIN user_personal_info up ON qi.user_id = up.user_id

GROUP BY up.user_id;
```

```
-- 6. Find vehicles with inactive models
SELECT vm.model_desc FROM vehicle_model vm WHERE status = 'inactive';

-- 7. Get average premium for each plan type
SELECT coverage_type, AVG(base_premium) AS avg_base
FROM product_config
GROUP BY coverage_type;

-- 8. List all users with their city and state
SELECT u.first_name, u.last_name, c.city_name, s.state_name
FROM user_personal_info u
JOIN city c ON u.city = c.city_id
JOIN state s ON u.state = s.state_id;

-- 9. Users Who Paid Above-Average Premium
SELECT first_name, last_name
FROM user_personal_info
WHERE user_id IN (
  SELECT qi.user_id
  FROM quote_info qi
  JOIN premium_summary ps ON qi.quote_id = ps.quote_id
  GROUP BY qi.user_id
  HAVING SUM(ps.total_premium) > (
    SELECT AVG(total_premium) FROM premium_summary
```

```
    )
);


-- 10. List models along with their make
SELECT vm.model_desc, vmk.make_desc FROM vehicle_model vm JOIN vehicle_make
vmk ON vm.make_id = vmk.make_id;


-- 11. Find top 3 users with highest total premium
SELECT up.first_name, SUM(ps.total_premium) AS total_premium
FROM premium_summary ps
JOIN quote_info qi ON qi.quote_id = ps.quote_id
JOIN user_personal_info up ON qi.user_id = up.user_id
GROUP BY up.user_id
ORDER BY total_premium DESC
LIMIT 3;


-- 12 List all quotes along with product config
SELECT q.quote_id, q.final_premium, pc.product_name
FROM quote_info q
JOIN product_config pc ON q.config_id = pc.config_id;


-- 13.City with the Highest Number of Users
SELECT c.city_name, COUNT(u.user_id) AS user_count
FROM user_personal_info u
```

```
JOIN city c ON u.city = c.city_id

GROUP BY c.city_name

ORDER BY user_count DESC

LIMIT 1;



-- 14.Procedure: Get all quotes by user

DELIMITER //

CREATE PROCEDURE GetQuotesByUser(IN uid INT)

BEGIN

  SELECT quote_id, final_premium, quote_date FROM quote_info WHERE user_id =
uid;

END //

DELIMITER ;


CALL GetQuotesByUser(5);


-- 15. Function: Calculate premium with tax

DELIMITER //

CREATE FUNCTION CalculateTotalPremium(base DECIMAL(10,2), tax
DECIMAL(5,2))

RETURNS DECIMAL(10,2)

DETERMINISTIC

BEGIN

  RETURN base + (base * tax / 100);
```

```
END //
DELIMITER ;


SELECT CalculateTotalPremium(5000.00, 18.0);
```