Database Project 5:

```
1  SELECT * FROM reservation_details LIMIT 5;
2
3
```

Data Output Messages Notifications

	reservation_id integer	customer_name text	vehicle text	category_name character varying (50)	start_date date	end_date date
1	3004	David Brown	Ford Taurus	STANDARD	2024-03-15	2024-03-20
2	3002	Alice Johnson	Nissan Altima	STANDARD	2024-02-15	2024-02-22
3	3003	Carol White	Chevrolet Malibu	STANDARD	2024-03-01	2024-03-09
4	3005	Eva Green	Kia Sorento	SUV	2024-04-01	2024-04-12
5	3001	Alice Johnson	Honda Accord	STANDARD	2024-02-01	2024-02-12

Data Output Messages Notifications

	ne ying (50)	start_date date	end_date date	total_cost numeric (10,2)	agreement_terms text
1		2024-03-15	2024-03-20	200.00	Customer responsible for fuel refill.
2		2024-02-15	2024-02-22	150.00	Customer agrees to return vehicle clean.
3		2024-03-01	2024-03-09	287.50	Customer agrees to mileage limits.
4		2024-04-01	2024-04-12	402.50	Updated: Customer to report any damages. (Fee Added)
5		2024-02-01	2024-02-12	395.00	Customer agrees to all rental terms. (Fee Added)

Database Project 5:

2. employee_maintenance_performance View

```sql
SELECT * FROM employee_maintenance_performance LIMIT 5;
```

Data Output   Messages   Notifications

	employee_id integer	employee_name character varying (100)	position character varying (50)	total_services bigint	total_service_revenue numeric
1	9	John Silver	Mechanic	4	350.97
2	3	Bill Brown	Technician	2	169.99
3	2	SUE GREEN	Assistant Manager	1	19.99
4	1	TOM HARRIS	Senior Manager	1	35.99
5	10	Ella Orange	Support	1	12.99

Database Project 5:

3. customer_feedback_summary View

Query   Query History   Scratch Pad ✕

```
1   SELECT * FROM customer_feedback_summary LIMIT 5;
2
3
```

Data Output   Messages   Notifications

SQL

	user_id integer	customer_name text	rating integer	comments character varying (255)
1	1	Alice Johnson	5	Excellent service and clean vehicle. - Thanks for your feedback!
2	3	Carol White	5	Average experience, car was okay. - Thanks for your feedback!
3	4	David Brown	4	Vehicle needed better cleaning. - Thanks for your feedback!
4	1	Alice Johnson	5	VERIFIED: Great car condition and smooth rental process! - Thanks for you
5	5	Eva Green	5	VERIFIED: Outstanding service from start to finish. - Thanks for your feedba

Data Output   Messages   Notifications

SQL

	ng (255)	vehicle text	start_date date	end_date date
1	ce and clean vehicle. - Thanks for your feedback!	Honda Accord	2024-02-01	2024-02-12
2	ience, car was okay. - Thanks for your feedback!	Chevrolet Malibu	2024-03-01	2024-03-09
3	d better cleaning. - Thanks for your feedback!	Ford Taurus	2024-03-15	2024-03-20
4	at car condition and smooth rental process! - Thanks for your feedba…	Nissan Altima	2024-02-15	2024-02-22
5	standing service from start to finish. - Thanks for your feedback!	Kia Sorento	2024-04-01	2024-04-12

Database Project 5:

4. vehicle_management_view (Updatable View)

```
1    -- Update a vehicle's year
2 ∨  UPDATE vehicle_management_view
3    SET year = 2024
4    WHERE vehicle_id = 1;
5
6    -- Verify the update
7 ∨  SELECT * FROM vehicle
8    WHERE vehicle_id = 1;
```

Data Output   Messages   Notifications

	vehicle_id [PK] integer	year integer	make character varying (50)	model character varying (50)	category_id integer	license_plate_num character varying (
1	1	2024	Honda	Accord	3	ABC123

Data Output   Messages   Notifications

|	odel haracter varying (50)	category_id integer	license_plate_num character varying (20)	employee_id integer	location_id integer	insurance_id integer
1	ccord	3	ABC123	2	1	1

Database Project 5:

Stored Procedures Examples

1. upgrade_user_account() Procedure

```
1    CALL upgrade_user_account();
2  ⌄ SELECT user_id, fname, lname, account_type
3    FROM app_user
4    WHERE user_id IN (1, 2, 3);
5
```

Data Output   Messages   Notifications

	user_id [PK] integer	fname character varying (100)	lname character varying (100)	account_type character varying (50)
1	2	Bob	Smith	premium
2	1	Alice	Johnson	premium
3	3	Carol	White	premium

Database Project 5:

2. calculate_category_revenue() Function

Query   Query History

```
1  |
2  SELECT calculate_category_revenue('Luxury') AS luxury_ca
3
4
```

Scrat

Data Output   Messages   Notifications

	luxury_category_revenue numeric
1	0

Database Project 5:

3. assign_vehicle_maintenance() Procedure

Query   Query History

```
1    -- Before calling the procedure
2    SELECT COUNT(*) FROM car_care WHERE vehicle_id = 1;
3    -- Output: Current number of maintenance records for vehicle 1
4
5    CALL assign_vehicle_maintenance(1, 'Oil Change', 49.99);
6
7    -- After calling the procedure
8  ⌄ SELECT * FROM car_care
9    WHERE vehicle_id = 1 AND service_type = 'Oil Change';
10
11   -- Expected Output:
12   -- A new row in car care table with:
```

Data Output   Messages   Notifications

	care_id [PK] integer	vehicle_id integer	service_type character varying (50)	date date	cost numeric (10,2)	receiving_employee_id integer
1	1001	1	Oil Change	2024-01-10	35.99	
2	1011	1	Oil Change	2024-11-28	49.99	
3	1012	1	Oil Change	2024-11-28	49.99	
4	1013	1	Oil Change	2024-11-28	49.99	

```
12   -- A new row in car care table with:
```

Data Output   Messages   Notifications

	service_type character varying (50)	date date	cost numeric (10,2)	receiving_employee_id integer	performing_employee_id integer
1	Oil Change	2024-01-10	35.99	1	1
2	Oil Change	2024-11-28	49.99	9	3
3	Oil Change	2024-11-28	49.99	9	3
4	Oil Change	2024-11-28	49.99	9	3

Database Project 5:

4. process_support_tickets() Procedure

```
1    CALL process_support_tickets();
2    -- Check updated support tickets
3 ∨  SELECT support_id, status, message
4    FROM support
5    WHERE status IN ('URGENT', 'CLOSED');
```

Data Output   Messages   Notifications

	support_id [PK] integer	status character varying (50)	message text
1	9002	CLOSED	Question about payment methods.
2	9004	CLOSED	Complaint about vehicle cleanliness.
3	9006	CLOSED	Help with online account.
4	9008	CLOSED	Problem with vehicle selection.
5	9001	URGENT	PRIORITY: Issue with reservation confirmation.
6	9003	CLOSED	PRIORITY: Request for additional car features. - Resolved
7	9007	CLOSED	Feedback on support service. - Quick Resolution
8	9009	CLOSED	Inquiry about rental terms. - Quick Resolution

	support_id [PK] integer	status character varying (50)	message text
3	9006	CLOSED	Help with online account.
4	9008	CLOSED	Problem with vehicle selection.
5	9001	URGENT	PRIORITY: Issue with reservation confirmation.
6	9003	CLOSED	PRIORITY: Request for additional car features. - Resolved
7	9007	CLOSED	Feedback on support service. - Quick Resolution
8	9009	CLOSED	Inquiry about rental terms. - Quick Resolution
9	9010	CLOSED	Technical issue with mobile app. - Quick Resolution
10	9005	CLOSED	PRIORITY: Assistance with insurance information. - Quick Resoluti...

Database Project 5:

4. Triggers

```
C:\Users\lhann\Desktop\Teamproject-4>psql -U postgres -d carrentalsystem
Password for user postgres:

psql (17.0)
WARNING: Console code page (437) differs from Windows code page (1252)
         8-bit characters might not work correctly. See psql reference
         page "Notes for Windows users" for details.
Type "help" for help.

carrentalsystem=# INSERT INTO reservation (reservation_id, user_id, vehicle_id, start_date, en
d_date, total_cost) VALUES (3011, 1, 1, '2024-07-01', '2024-07-05', 250.00);
INSERT 0 1
carrentalsystem=# SELECT * FROM support ORDER BY support_id DESC LIMIT 1;
 support_id | user_id |                  message                  |    date    |    status
------------+---------+-------------------------------------------+------------+-------------
       9011 |       1 | New reservation created for vehicle ID: 1 | 2024-11-27 | AUTO-LOGGED
(1 row)


carrentalsystem=# UPDATE reservation SET total_cost = 300.00 WHERE reservation_id = 3011;
UPDATE 1
carrentalsystem=# SELECT * FROM support WHERE message LIKE '%Price changed%' ORDER BY support_
id DESC LIMIT 1;
 support_id | user_id |                       message                        |    date
     |    status
------------+---------+------------------------------------------------------+--------
----+--------------
       9012 |       1 | Price changed from 250.00 to 300.00 for reservation ID: 3011 | 2024-11
-27 | PRICE-CHANGE
(1 row)


carrentalsystem=# DELETE FROM vehicle WHERE vehicle_id = 10;
ERROR:  update or delete on table "vehicle" violates foreign key constraint "reservation_vehic
le_id_fkey" on table "reservation"
DETAIL:  Key (vehicle_id)=(10) is still referenced from table "reservation".
carrentalsystem=# INSERT INTO reservation (reservation_id, user_id, vehicle_id, start_date, en
d_date, total_cost) VALUES (3012, 3, 2, '2024-08-01', '2024-08-05', 200.00);
INSERT 0 1
carrentalsystem=# SELECT user_id, account_type FROM app_user WHERE user_id = 3;
 user_id | account_type
---------+--------------
       3 | premium
(1 row)


carrentalsystem=#
```

Database Project 5: