



Database Project

Car Dealer Company

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Triggers

1. email_validate_customer : validates the email id for customer
2. phone_number_validate_customer: validates phone number and formats it to the international format.
3. phone_number_validate_insurance_company : validates phone number and formats it to the international format.
4. email_validate_vehicle_vendor : validates the email id for a vendor.
5. email_validate_policy_manager : validates email id for policy managers.
6. phone_number_validate_policy_manager : validates phone number and formats it to the international format.
7. has_offer_validations : validates that the product of installment amount and number of installments are consistent with the vehicle price.
8. validate_age : verifies that the customer is at least 18 years old.
9. emi_register_check : checks if the EMI request for a vehicle is allowed.
10. emi_availability_check : checks if an EMI offer is available for the vehicle when the transaction is made under emi mode.
11. change_order_status : Changes the status to READY in the customer_order when the vehicle arrives the showroom, ie the vendor delivered the vehicle. (ON UPDATE)
12. check_for_normal_payment : Check if vehicle has arrived or not before payment (normal or emi).
13. change_order_status2 : Changes the status to READY in the customer_order when the vehicle arrives the showroom, ie the vendor delivered the vehicle. (ON INSERT)
14. change_order_status1 : Changes the status to IN_TRANSIT in the customer_order when order is given to vehicle vendor.
15. change_order_status3 : Changes the status to DELIVERED when customer pays (emi or normal).

Functions and Procedures

1. FUNCTION check_phone_num : Runs a regular expression check to validate phone number and converts it to international format

2. PROCEDURE check_email : Runs a regular expression check to validate email address
3. PROCEDURE insert_customer_payment : Inserts a payment made by a customer into the transaction table and links it to customer payment table. If it an EMI payment, the order is verified with the emi registration table.
4. PROCEDURE insert_salary_payment : Inserts a salary transaction, and links it to the give_salary table. An error is raised if the salary paid is less than the base salary.
5. PROCEDURE salary_summary : Generates a summary of all salary paid to a given employee.
6. PROCEDURE pending_emi_payments : Lists out customers who are enrolled for EMI payment option but hadn't paid in the last month.
7. FUNCTION inc_by_percent : Increments the given parameter by a given percentage.
8. PROCEDURE salary_increment : Increment the salary of given employee by a given percentage.
9. PROCEDURE salary_increment_all : Increments the salaries of all employees by a given percentage.
10. PROCEDURE salary_decrement : Decrements the salary of a given employee by a given percentage.
11. FUNCTION get_emi : given a order_id gets emi_name if available
12. PROCEDURE create_user : given username, role, and password creates user and gives role.
13. PROCEDURE INITEMPLOYEE : creates users for employee with username as password. Creates user only user does not exists.
14. PROCEDURE INIT_INSURANCE_AGENT: creates users for insurance_company with appropriate privilege. Creates user only user does not exists.
15. PROCEDURE INIT_VEHICLE_DEALER : creates users for vehicle_vendor with appropriate privileges. Creates user only user does not exists.

VIEWS

1. customer_order_view (order id, customer name, ETA, status, vehicle id, vehicle name, order_date)

2. customer_payment_view (customer_name, transaction_id, emi_name, bank, account_number, payment_date, amount)
3. employee_view (id, name, address, salary, gender, age, department, manager)
4. salary_payment_view (transaction_id, employee_name, bank, account_number, payment_date, amount)
5. vehicles_not_delivered (shows orders which are not yet delivered)
6. vehicle_emi_view (combined view for vehicle and emi showing possible emi for each vehicle)

Command to backup the database:

```
mysqldump --databases car_dealer -u root -p --result-file=backup.sql
```

Roles

Role	Permission	Tables
DBA	ALL	%
Manager	SELECT, INSERT, UPDATE, DELETE	%
Accountant	SELECT, INSERT, UPDATE, DELETE	%transaction, give_salary, customer_payment, emi, registered
Broker	SELECT, INSERT, UPDATE	customer, customer_order, has_offer, has_insurance, vehicle, books, registered
	SELECT	insurance_company, vehicle_insurance, emi, customer_payment, customer_transaction
Insurance_agent	SELECT, INSERT, UPDATE, DELETE	insurance_company, vehicle_insurance, has_insurance
	SELECT	vehicle, customer, customer_order, books
Vendor_company_dealer	SELECT, INSERT, UPDATE, DELETE	vehicle, vehicle_vendor, vehicle_order

	SELECT	dealer_vendor_transaction
--	--------	---------------------------

Description of tables

```
MariaDB [car_dealer]> show FULL TABLES;
```

Tables_in_car_dealer	Table_type
books	BASE TABLE
customer	BASE TABLE
customer_order	BASE TABLE
customer_order_view	VIEW
customer_payment	BASE TABLE
customer_payment_view	VIEW
customer_transaction	BASE TABLE
dealer_vendor_transaction	BASE TABLE
dependants	BASE TABLE
emi	BASE TABLE
employee	BASE TABLE
employee_view	VIEW
give_salary	BASE TABLE
has_insurance	BASE TABLE
has_offer	BASE TABLE
insurance_company	BASE TABLE
managed_by	BASE TABLE
policy_manager	BASE TABLE
registered	BASE TABLE
salary_payment_view	VIEW
salary_transaction	BASE TABLE
vehicle	BASE TABLE
vehicle_color	BASE TABLE
vehicle_emi_view	VIEW
vehicle_insurance	BASE TABLE
vehicle_vendor	BASE TABLE
vehicles_not_delivered	VIEW
vendor_order	BASE TABLE
vendor_order_customer_order	BASE TABLE

```
MariaDB [car_dealer]> describe books;
```

Field	Type	Null	Key	Default	Extra
vehicle_id	int(11)	NO	MUL	NULL	
customer_order_id	int(11)	NO	PRI	NULL	
color	varchar(100)	NO		NULL	

```
3 rows in set (0.00 sec)
```

```
MariaDB [car_dealer]> describe customer;
```

Field	Type	Null	Key	Default	Extra
id	int(11)	NO	PRI	NULL	auto_increment
name	varchar(255)	NO		NULL	
contact_number	varchar(20)	NO		NULL	
address	varchar(255)	NO		NULL	
email	varchar(255)	NO	UNI	NULL	
age	int(11) unsigned	NO		NULL	

```
6 rows in set (0.00 sec)
```

```
MariaDB [car_dealer]> describe customer_order;
```

Field	Type	Null	Key	Default	Extra
id	int(11)	NO	PRI	NULL	auto_increment
ETA	date	NO		NULL	
status	enum('PENDING','IN_TRANSIT','READY','DELIVERED')	NO		NULL	
date	date	NO		NULL	
customer_id	int(11)	NO	MUL	NULL	
sold_by	int(11)	YES	MUL	NULL	

```
MariaDB [car_dealer]> DESCRIBE customer_payment;
```

Field	Type	Null	Key	Default	Extra
transaction_id	varchar(50)	NO	PRI	NULL	
order_id	int(11)	NO	PRI	NULL	
type	enum('advance','emi','normal')	NO		normal	

```
3 rows in set (0.00 sec)
```

```
MariaDB [car_dealer]> DESCRIBE customer_transaction;
```

Field	Type	Null	Key	Default	Extra
transaction_id	varchar(50)	NO	PRI	NULL	
bank	varchar(100)	NO		NULL	
date	date	NO		NULL	
account_number	varchar(50)	NO		NULL	
amount	decimal(12,2) unsigned	NO		NULL	

```
5 rows in set (0.00 sec)
```

```
MariaDB [car_dealer]> DESCRIBE dealer_vendor_transaction;
```

Field	Type	Null	Key	Default	Extra
transaction_id	varchar(50)	NO	PRI	NULL	
vendor_order_id	int(11)	YES	MUL	NULL	
bank	varchar(100)	NO		NULL	
date	date	NO		NULL	
account_number	varchar(50)	NO		NULL	
amount	decimal(12,2) unsigned	NO		NULL	

```
6 rows in set (0.00 sec)
```



```
MariaDB [car_dealer]> DESCRIBE dependants;
```

Field	Type	Null	Key	Default	Extra
name	varchar(60)	NO	PRI	NULL	
age	int(11) unsigned	NO		NULL	
employee_id	int(11)	NO	PRI	NULL	

```
3 rows in set (0.00 sec)
```

```
MariaDB [car_dealer]> DESCRIBE emi;
```

Field	Type	Null	Key	Default	Extra
id	int(11)	NO	PRI	NULL	auto_increment
name	varchar(50)	NO		NULL	
no_of_installments	int(11) unsigned	NO		NULL	
installment_amount	decimal(12,2) unsigned	NO		NULL	

```
4 rows in set (0.00 sec)
```

```
MariaDB [car_dealer]> DESCRIBE employee;
```

Field	Type	Null	Key	Default	Extra
id	int(11)	NO	PRI	NULL	auto_increment
name	varchar(255)	NO		NULL	
address	varchar(511)	NO		NULL	
salary	decimal(12,2) unsigned	NO		NULL	
gender	enum('male','female','other')	YES		NULL	
age	int(11) unsigned	NO		NULL	
dept	enum('admin','broker','auxiliary','human_resource','manager','accountant')	NO		NULL	
policy_manager	int(11)	NO	MUL	NULL	
policy_join_date	date	NO		NULL	
policy_renewal_date	date	NO		NULL	

```
10 rows in set (0.00 sec)
```

```
MariaDB [car_dealer]> DESCRIBE give_salary;
```

Field	Type	Null	Key	Default	Extra
employee_id	int(11)	NO	PRI	NULL	
transaction_id	varchar(50)	NO	PRI	NULL	

```
2 rows in set (0.00 sec)
```

```
MariaDB [car_dealer]> DESCRIBE has_insurance;
```

Field	Type	Null	Key	Default	Extra
customer_order_id	int(11)	NO	PRI	NULL	
vehicle_insurance_id	int(11)	NO	PRI	NULL	
renewal_date	date	NO		NULL	

```
3 rows in set (0.00 sec)
```

```
MariaDB [car_dealer]> DESCRIBE has_offer;
```

```
+-----+-----+-----+-----+-----+-----+
| Field      | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| emi_id     | int(11)| NO   | PRI | NULL    |       |
| vehicle_id | int(11)| NO   | PRI | NULL    |       |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

```
MariaDB [car_dealer]> DESCRIBE insurance_company;
```

```
+-----+-----+-----+-----+-----+-----+
| Field      | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| id         | int(11)| NO   | PRI | NULL    | auto_increment |
| name       | varchar(60)| NO |     | NULL    |               |
| contact_number | varchar(20)| NO |     | NULL    |               |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```

```
MariaDB [car_dealer]> DESCRIBE managed_by;
```

```
+-----+-----+-----+-----+-----+-----+
| Field      | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| employee_id | int(11)| NO   | PRI | NULL    |       |
| managed_by  | int(11)| YES  | MUL | NULL    |       |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

```
MariaDB [car_dealer]> DESCRIBE policy_manager;
```

```
+-----+-----+-----+-----+-----+-----+
| Field      | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| id         | int(11)| NO   | PRI | NULL    | auto_increment |
| name       | varchar(255)| NO |     | NULL    |               |
| contact_number | varchar(20)| NO |     | NULL    |               |
| email      | varchar(255)| NO | UNI | NULL    |               |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)
```

```
MariaDB [car_dealer]> DESCRIBE registered;
```

```
+-----+-----+-----+-----+-----+-----+
| Field      | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| customer_order_id | int(11)| NO   | PRI | NULL    |       |
| emi_id     | int(11)| NO   | MUL | NULL    |       |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

```
MariaDB [car_dealer]> DESCRIBE salary_transaction;
```

```
+-----+-----+-----+-----+-----+-----+
| Field      | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| transaction_id | varchar(50)| NO | PRI | NULL    |       |
| bank         | varchar(100)| NO |     | NULL    |       |
| date         | date    | NO   |     | NULL    |       |
| account_number | varchar(50)| NO   |     | NULL    |       |
| amount       | decimal(12,2) unsigned | NO |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)
```



```
MariaDB [car_dealer]> DESCRIBE vehicle;
```

Field	Type	Null	Key	Default	Extra
id	int(11)	NO	PRI	NULL	auto_increment
name	varchar(255)	NO		NULL	
price	decimal(12,2) unsigned	NO		NULL	
mileage	decimal(5,2) unsigned	NO		NULL	
cylinder_vol	int(11) unsigned	NO		NULL	
transmission	int(11) unsigned	NO		5	
max_speed	int(11) unsigned	NO		NULL	
particulars	varchar(511)	YES		NULL	

```
8 rows in set (0.00 sec)
```

```
MariaDB [car_dealer]> DESCRIBE vehicle_color;
```

Field	Type	Null	Key	Default	Extra
id	int(11)	NO	MUL	NULL	
color	varchar(100)	NO		NULL	

```
2 rows in set (0.00 sec)
```

```
MariaDB [car_dealer]> DESCRIBE vehicle_insurance;
```

Field	Type	Null	Key	Default	Extra
id	int(11)	NO	PRI	NULL	
auto_increment					
policy_name	varchar(60)	NO		NULL	
coverage	enum('liability','collision','comprehensive','personal_injury','underinsured_protection')	NO			liability
insurance_company_id	int(11)	NO	MUL	NULL	

```
4 rows in set (0.00 sec)
```

```
MariaDB [car_dealer]> DESCRIBE vehicle_vendor;
```

Field	Type	Null	Key	Default	Extra
id	int(11)	NO	PRI	NULL	auto_increment
address	varchar(500)	NO		NULL	
date_of_join	date	NO		NULL	
name	varchar(255)	NO		NULL	
email	varchar(255)	NO	UNI	NULL	
comments	varchar(511)	YES		NULL	

```
6 rows in set (0.00 sec)
```

```
MariaDB [car_dealer]> DESCRIBE vendor_order;
```

Field	Type	Null	Key	Default	Extra
id	int(11)	NO	PRI	NULL	auto_increment
vendor_id	int(11)	NO	MUL	NULL	
vehicle_id	int(11)	NO	MUL	NULL	
status	enum('PENDING','DELIVERED','IN_TRANSIT')	NO		PENDING	
quantity	int(11) unsigned	NO		NULL	

```
5 rows in set (0.00 sec)
```

```
MariaDB [car_dealer]> DESCRIBE vendor_order_customer_order;
```

Field	Type	Null	Key	Default	Extra
vendor_order_id	int(11)	NO	PRI	NULL	
customer_order_id	int(11)	NO	PRI	NULL	

```
2 rows in set (0.00 sec)
```

Description of views

```
MariaDB [car_dealer]> DESCRIBE customer_order_view;
```

Field	Type	Null	Key	Default	Extra
order_id	int(11)	NO		0	
customer_name	varchar(255)	NO		NULL	
ETA	date	NO		NULL	
status	enum('PENDING','IN_TRANSIT','READY','DELIVERED')	NO		NULL	
vehicle_id	int(11)	NO		0	
vehicle_name	varchar(255)	NO		NULL	
order_date	date	NO		NULL	

```
7 rows in set (0.00 sec)
```

```
MariaDB [car_dealer]> DESCRIBE customer_payment_view;
```

Field	Type	Null	Key	Default	Extra
customer_name	varchar(255)	NO		NULL	
transaction_id	varchar(50)	NO		NULL	
emi_name	varchar(50)	YES		NULL	
bank	varchar(100)	NO		NULL	
account_number	varchar(50)	NO		NULL	
payment_date	date	NO		NULL	
amount	decimal(12,2) unsigned	NO		NULL	

```
7 rows in set (0.00 sec)
```

```
MariaDB [car_dealer]> DESCRIBE employee_view;
```

Field	Type	Null	Key	Default	Extra
ID	int(11)	NO		0	
Name	varchar(255)	NO		NULL	
Address	varchar(511)	NO		NULL	
salary	decimal(12,2) unsigned	NO		NULL	
gender	enum('male','female','other')	YES		NULL	
Age	int(11) unsigned	NO		NULL	
Department	enum('admin','broker','auxiliary','human_resource','manager','accountant')	NO		NULL	
Manager	varchar(255)	YES		NULL	

```
8 rows in set (0.00 sec)
```

```
MariaDB [car_dealer]> DESCRIBE salary_payment_view;
```

Field	Type	Null	Key	Default	Extra
transaction_id	varchar(50)	NO		NULL	
employee_name	varchar(255)	NO		NULL	
bank	varchar(100)	NO		NULL	
account_number	varchar(50)	NO		NULL	
payment_date	date	NO		NULL	
amount	decimal(12,2) unsigned	NO		NULL	

```
6 rows in set (0.00 sec)
```

```
MariaDB [car_dealer]> DESCRIBE vehicle_emi_view;
```

Field	Type	Null	Key	Default	Extra
id	int(11)	NO		0	
name	varchar(255)	NO		NULL	
price	decimal(12,2) unsigned	NO		NULL	
mileage	decimal(5,2) unsigned	NO		NULL	
cylinder_vol	int(11) unsigned	NO		NULL	
transmission	int(11) unsigned	NO		5	
max_speed	int(11) unsigned	NO		NULL	
particulars	varchar(511)	YES		NULL	
emi_name	varchar(50)	NO		NULL	
no_of_installments	int(11) unsigned	NO		NULL	
installment_amount	decimal(12,2) unsigned	NO		NULL	

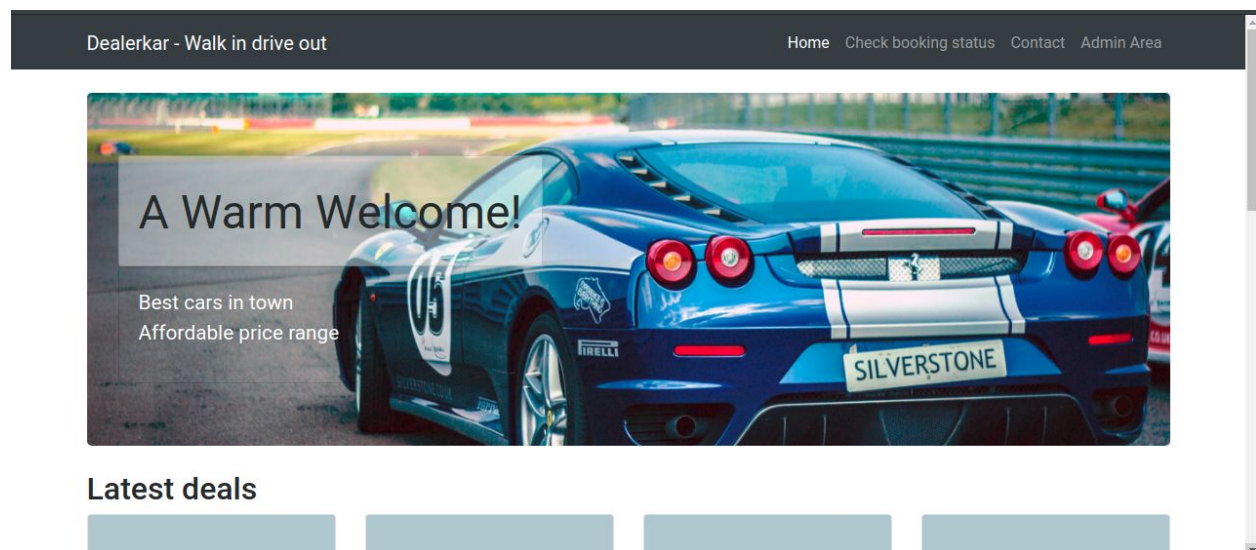
11 rows in set (0.00 sec)

```
MariaDB [car_dealer]> DESCRIBE vehicles_not_delivered;
```

Field	Type	Null	Key	Default	Extra
id	int(11)	NO		0	
name	varchar(255)	NO		NULL	
contact_number	varchar(20)	NO		NULL	
address	varchar(255)	NO		NULL	
email	varchar(255)	NO		NULL	
age	int(11) unsigned	NO		NULL	
ETA	date	NO		NULL	

7 rows in set (0.00 sec)


Front end views




Dealerkar - Walk in drive out

Home Check booking status Contact Admin Area


Latest deals




Toyota GT 86
₹ 11300000.00
[More](#)



Lykan Hypersport
₹ 12500000.00
[More](#)



Bugatti Veyron
₹ 115500000.00
Fastest Car in the world
[More](#)

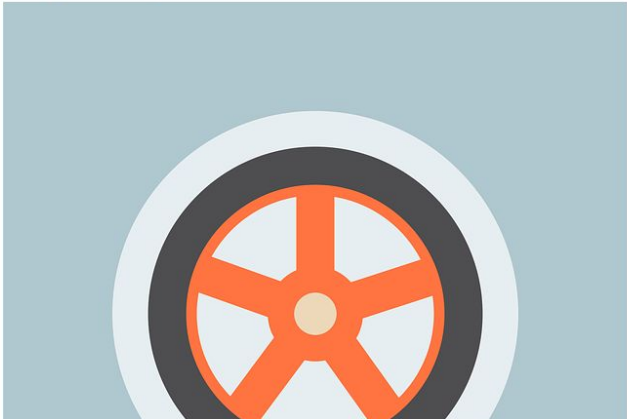


Nissan 350Z
₹ 9500000.00
[More](#)

Dealerkar - Walk in drive out

Home Check booking status Contact Admin Area

Bugatti Veyron



Max Speed	407
Cylinder vol	7993
Mileage	3.30
Transmission	6
Price	₹ 115500000.00

Available in : silver gray red

Dealerkar - Walk in drive out

Home Check booking status Contact Admin Area

Registered phone number:

+919947286188

Email id:

soorajkandathil@gmail.com

Submit

Date	ETA	Status
2018-01-12	2018-03-08	Your order is arriving. Please wait.
2017-06-22	2017-11-09	Your order was delivered. Thank you for shopping with us.

Copyright © Dealerkar 2018

Dealerkar - Walk in drive out

Home Check booking status Contact Admin Area

Dealerkar. The best deals in town

Welcome to Dealerkar. Book your car today!

Contact us:
3110 Main St Ste 300
Santa Monica, CA, 90405-5354
Email us:
sales@dealerkar.com

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Dealerkar

Login

Please login with your company id

Username

Shivang Shukla

Password

.....

Login

☐ Kepp me logged in

MySQL » Server » Database: car_dealer Logout

Database: car_dealer

[Alter database](#) [Database schema](#) [Privileges](#)

Tables and views

Search data in tables (23)

Table	Engine [?]	Collation [?]	Data Length [?]	Index Length [?]	Data Free [?]	Auto Increment [?]	Rows [?]	Comment [?]
<input type="checkbox"/> books	InnoDB	utf8mb4_general_ci	16,384	16,384	0		~ 6	
<input type="checkbox"/> customer	InnoDB	utf8mb4_general_ci	16,384	16,384	0	6	~ 5	
<input type="checkbox"/> customer_order	InnoDB	utf8mb4_general_ci	16,384	32,768	0	7	~ 6	

Selected (0)

Move to other database:

MySQL » Server » car_dealer » Select: vehicle

SELECT * FROM `vehicle` LIMIT 50

Modify	id	name	price	mileage	cylinder_vol	transmission	max_speed	particulars
<input type="checkbox"/> edit	1	Toyota GT 86	11300000.00	8.00	2000	5	310	<u>NULL</u>
<input type="checkbox"/> edit	2	Lykan Hypersport	12500000.00	7.80	3746	6	384	<u>NULL</u>
<input type="checkbox"/> edit	3	Bugatti Veyron	115500000.00	3.30	7993	6	407	Fastest Car in the world
<input type="checkbox"/> edit	4	Nissan 350Z	9500000.00	7.50	3500	5	240	<u>NULL</u>
<input type="checkbox"/> edit	5	Lamborghini Egoista	23000000.00	5.30	5200	5	325	<u>NULL</u>
<input type="checkbox"/> edit	6	Hennessey Venom GT	47200000.00	5.50	5000	7	418	<u>NULL</u>
<input type="checkbox"/> edit	7	Ferrari LaFerrari	97500000.00	3.80	6262	7	349	<u>NULL</u>
<input type="checkbox"/> edit	8	McLaren P1	86400000.00	3.50	3799	7	350	<u>NULL</u>

Whole result: ☐ 8 rows

[Import](#)

We can see that login as user with lower privilege gives limited access to database.