Database Project

Car Dealer Company

Libin N. George , 111501015
Sooraj Tom , 111501036

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_avalibility_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 from PENDING to READY when the vehicle arrives the showroom, ie the vendor delivered the vehicle.

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.

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 tables;
+--------------------------+
| Tables_in_car_dealer     |
+--------------------------+
| books                    |
| customer                 |
| customer_order           |
| customer_payment         |
| customer_transaction     |
| dealer_vendor_transaction |
| dependants               |
| emi                      |
| employee                 |
| give_salary              |
| has_insurance            |
| has_offer                |
| insurance_company        |
| manager                  |
| policy_manager           |
| registered               |
| salary_transaction       |
| vehicle                  |
| vehicle_insurance        |
| vehicle_vendor           |
| vendor_order             |
+--------------------------+
21 rows in set (0.00 sec)
```

```
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    |       |
+------------------+---------+------+-----+---------+-------+
2 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   |     | NULL    |                |
| age            | int(11)                                              | NO   |     | NULL    |                |
| dept           | enum('admin','broker','auxiliary','human_resource')  | NO   |     | NULL    |                |
+----------------+------------------------------------------------------+------+-----+---------+----------------+
7 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 | int(10) unsigned | NO   |     | NULL    |                |
+----------------+------------------+------+-----+---------+----------------+
3 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   |     | 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   |     | NULL    |                |
| comments     | varchar(511) | YES  |     | NULL    |                |
+--------------+--------------+------+-----+---------+----------------+
6 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)| NO   |     | NULL    |       |
+----------------+--------------+------+-----+---------+-------+
5 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)     | NO   |     | NULL    |                |
| installment_amount| int(11)     | NO   |     | NULL    |                |
+-------------------+-------------+------+-----+---------+----------------+
4 rows in set (0.00 sec)


MariaDB [car_dealer]> describe manager;
+---------+-----------------------------+------+-----+---------+----------------+
| 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  | int(11)                     | NO   |     | NULL    |                |
| gender  | enum('male','female','other') | YES |     | NULL    |                |
+---------+-----------------------------+------+-----+---------+----------------+
5 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)| 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    |       |
| bank           | varchar(100)  | NO   |     | NULL    |       |
| date           | date          | NO   |     | NULL    |       |
| account_number | varchar(50)   | NO   |     | NULL    |       |
| amount         | decimal(12,2) | 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        | int(11)       | NO   |     | NULL    |                |
| color        | varchar(100)  | NO   |     | NULL    |                |
| mileage      | decimal(5,2)  | NO   |     | NULL    |                |
| cylinder_vol | decimal(5,2)  | NO   |     | NULL    |                |
| transmission | int(11)       | NO   |     | 5       |                |
| max_speed    | int(11)       | NO   |     | NULL    |                |
| particulars  | varchar(511)  | YES  |     | NULL    |                |
+--------------+---------------+------+-----+---------+----------------+
9 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','DELIVERED','IN_TRANSIT')     | NO   |     | NULL    |                |
| date        | date                                         | NO   |     | NULL    |                |
| customer_id | int(11)                                      | NO   | MUL | NULL    |                |
+-------------+----------------------------------------------+------+-----+---------+----------------+
5 rows in set (0.00 sec)
```

```
MariaDB [car_dealer]> describe customer_payment;
+----------------+-------------------------------+------+-----+---------+-------+
| Field          | Type                          | Null | Key | Default | Extra |
+----------------+-------------------------------+------+-----+---------+-------+
| transaction_id | varchar(50)                   | NO   | PRI | NULL    |       |
| customer_id    | int(11)                       | NO   | PRI | NULL    |       |
| type           | enum('advance','emi','normal')| NO   |     | normal  |       |
+----------------+-------------------------------+------+-----+---------+-------+
3 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              | int(11)                       | NO   |     | NULL    |                |
| gender              | enum('male','female','other') | YES  |     | NULL    |                |
| age                 | int(11)                       | NO   |     | NULL    |                |
| managed_by          | int(11)                       | YES  | MUL | 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 dependants;
+-------------+-------------+------+-----+---------+-------+
| Field       | Type        | Null | Key | Default | Extra |
+-------------+-------------+------+-----+---------+-------+
| name        | varchar(60) | NO   | PRI | NULL    |       |
| age         | int(11)     | NO   |     | NULL    |       |
| employee_id | int(11)     | NO   | PRI | NULL    |       |
+-------------+-------------+------+-----+---------+-------+
3 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 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','collission','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 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 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 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    |                |
| transaction_id | varchar(50)                              | NO   | MUL | NULL    |                |
| status         | enum('PENDING','DELIVERED','IN_TRANSIT') | NO   |     | PENDING |                |
| quantity       | int(11)                                  | NO   |     | NULL    |                |
+----------------+------------------------------------------+------+-----+---------+----------------+
```