# A database for a Vehicle Insurance Company

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**Team 3**

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# Physical Data Model(PDM)

## PDM for vehicle insurance service

**- Creating table and testing sql queries using MySQL Workbench**

```
CREATE DATABASE IF NOT EXISTS mydb;
USE mydb;
CREATE TABLE IF NOT EXISTS t3_INCIDENT
(
t3_Incident_Id VARCHAR(20) NOT NULL ,
t3_Incident_Type VARCHAR(50) NULL ,
t3_Incident_Date DATE NOT NULL ,
t3_Description VARCHAR(1000) NULL ,
CONSTRAINT XPKINCIDENT_17 PRIMARY KEY (t3_Incident_Id)
);
CREATE UNIQUE INDEX XPKINCIDENT_17 ON t3_INCIDENT (t3_Incident_Id ASC);

CREATE TABLE IF NOT EXISTS t3_CUSTOMER
(
t3_Cust_Id VARCHAR(15) NOT NULL ,
t3_Cust_FName VARCHAR(15) NOT NULL ,
t3_Cust_LName VARCHAR(15) NOT NULL ,
t3_Cust_DOB DATE NOT NULL ,
t3_Cust_Gender CHAR(2) NOT NULL ,
t3_Cust_Address VARCHAR(35) NOT NULL ,
t3_Cust_MOB_Number BIGINT NOT NULL ,
t3_Cust_Email VARCHAR(25) NULL ,
t3_Cust_Passport_Number  VARCHAR(20) NULL ,
t3_Cust_Marital_Status CHAR(12) NULL ,

t3_Cust_PPS_Number INTEGER NULL ,

CONSTRAINT XPKCUSTOMER PRIMARY KEY (t3_Cust_Id)

);


CREATE UNIQUE INDEX XPKCUSTOMER_1 ON t3_CUSTOMER (t3_Cust_Id ASC);



CREATE TABLE IF NOT EXISTS t3_INCIDENT_REPORT

(

Incident_Report_Id VARCHAR(20) NOT NULL ,

t3_Incident_Type CHAR(50) NULL ,

t3_Incident_Inspector VARCHAR(20) NULL ,

t3_Incident_Cost INTEGER NULL ,

t3_Incident_Report_Description VARCHAR(1000) NULL ,

t3_Incident_Id VARCHAR(20) NOT NULL ,

t3_Cust_Id VARCHAR(20) NOT NULL ,

CONSTRAINT XPKINCIDENT_REPORT_18 PRIMARY KEY

(Incident_Report_Id,t3_Incident_Id,t3_Cust_Id),

CONSTRAINT R_83 FOREIGN KEY (t3_Incident_Id) REFERENCES t3_INCIDENT (t3_Incident_Id) ON

DELETE CASCADE ON UPDATE CASCADE,

CONSTRAINT R_86 FOREIGN KEY (t3_Cust_Id) REFERENCES t3_CUSTOMER (t3_Cust_Id) ON

DELETE CASCADE ON UPDATE CASCADE

);

CREATE UNIQUE INDEX XPKINCIDENT_REPORT_18 ON t3_INCIDENT_REPORT (Incident_Report_Id ASC,t3_Incident_Id

ASC,t3_Cust_Id ASC);
```

```
CREATE TABLE IF NOT EXISTS t3_INSURANCE_COMPANY
(
t3_Company_Name VARCHAR(70) NOT NULL ,
t3_Company_Address VARCHAR(400) NULL ,
t3_Company_Contact_Number bigint NULL ,
t3_Company_Fax bigint NULL ,
t3_Company_Email VARCHAR(50) NULL ,
t3_Company_Website VARCHAR(50) NULL ,
t3_Company_Location VARCHAR(50) NULL,
t3_Company_Department_Name VARCHAR(50) NULL ,
t3_Company_Office_Name VARCHAR(50) NULL ,
CONSTRAINT XPKINSURANCE_COMPANY_15 PRIMARY KEY
(t3_Company_Name)
);
CREATE UNIQUE INDEX XPKINSURANCE_COMPANY_15 ON t3_INSURANCE_COMPANY
(t3_Company_Name ASC);
-- Table 5
CREATE TABLE IF NOT EXISTS t3_DEPARTMENT
(
t3_Department_Name VARCHAR(50) NOT NULL ,
t3_Department_ID VARCHAR(50) NOT NULL ,
t3_Department_Staff VARCHAR(50) NULL ,
t3_Company_Name VARCHAR(100) NOT NULL ,
CONSTRAINT XPKDEPARTMENT PRIMARY KEY
(t3_Department_Name,t3_Department_ID,t3_Company_Name),
CONSTRAINT R_56 FOREIGN KEY (t3_Company_Name)
REFERENCES t3_INSURANCE_COMPANY (t3_Company_Name) ON DELETE CASCADE ON UPDATE
CASCADE
);
CREATE UNIQUE INDEX XPKDEPARTMENT ON t3_DEPARTMENT
(t3_Department_Name ASC,t3_Department_ID ASC,t3_Company_Name ASC);


CREATE TABLE t3_VEHICLE_SERVICE
(
t3_Department_Name VARCHAR(100) NOT NULL ,
t3_Vehicle_Service_Company_Name VARCHAR(10) NOT NULL ,
t3_Vehicle_Service_Address VARCHAR(200) NULL ,
t3_Vehicle_Service_Contact VARCHAR(200) NULL ,
t3_Vehicle_Service_Incharge VARCHAR(200) NULL ,
t3_Vehicle_Service_Type VARCHAR(200) NULL ,
t3_Department_ID VARCHAR(200) NOT NULL ,
t3_Company_Name VARCHAR(200) NOT NULL ,
CONSTRAINT XPKVEHICLE_SERVICE PRIMARY KEY
(t3_Vehicle_Service_Company_Name,t3_Department_Name),
CONSTRAINT R_50 FOREIGN KEY (t3_Department_Name, t3_Department_ID,
t3_Company_Name) REFERENCES t3_DEPARTMENT (t3_Department_Name,
t3_Department_ID, t3_Company_Name) ON DELETE CASCADE ON UPDATE CASCADE
);
CREATE UNIQUE INDEX XPKVEHICLE_SERVICE ON t3_VEHICLE_SERVICE
(t3_Vehicle_Service_Company_Name ASC,t3_Department_Name ASC);
```

```
CREATE TABLE t3_VEHICLE
(
t3_Vehicle_Id VARCHAR(20) NOT NULL ,
t3_Policy_Id VARCHAR(20) NULL ,
t3_Vehicle_Registration_Number VARCHAR(20) NOT NULL ,
t3_Vehicle_Value bigint NULL ,
t3_Vehicle_Type VARCHAR(20) NOT NULL ,
t3_Vehicle_Size INTEGER NULL ,
t3_Vehicle_Number_Of_Seat INTEGER NULL ,
t3_Vehicle_Manufacturer VARCHAR(20) NULL ,
t3_Vehicle_Engine_Number INTEGER NULL ,
t3_Vehicle_Chasis_Number INTEGER NULL ,
t3_Vehicle_Number INTEGER NULL ,
t3_Vehicle_Model_Number VARCHAR(20) NULL ,
t3_Cust_Id VARCHAR(20) NOT NULL ,
CONSTRAINT XPKVEHICLE_6 PRIMARY KEY (t3_Vehicle_Id,t3_Cust_Id),
CONSTRAINT R_92 FOREIGN KEY (t3_Cust_Id) REFERENCES t3_CUSTOMER
(t3_Cust_Id) ON DELETE CASCADE ON UPDATE CASCADE
);
CREATE UNIQUE INDEX XPKVEHICLE_6 ON t3_VEHICLE (t3_Vehicle_Id ASC,t3_Cust_Id ASC);


CREATE TABLE t3_PREMIUM_PAYMENT
(
t3_Premium_Payment_Id VARCHAR(20) NOT NULL ,
t3_Policy_Number VARCHAR(20) NOT NULL ,
t3_Premium_Payment_Amount INTEGER NOT NULL ,
t3_Premium_Payment_Schedule DATE NOT NULL ,
t3_Receipt_Id VARCHAR(20) NOT NULL ,
t3_Cust_Id VARCHAR(20) NOT NULL ,
CONSTRAINT XPKPREMIUM_PAYMENT_5 PRIMARY KEY
(t3_Premium_Payment_Id,t3_Cust_Id),
CONSTRAINT R_85 FOREIGN KEY (t3_Cust_Id) REFERENCES t3_CUSTOMER
(t3_Cust_Id) ON DELETE CASCADE ON UPDATE CASCADE
);
CREATE UNIQUE INDEX XPKPREMIUM_PAYMENT_5 ON
t3_PREMIUM_PAYMENT
(t3_Premium_Payment_Id ASC,t3_Cust_Id ASC);


CREATE TABLE IF NOT EXISTS t3_RECEIPT
(
t3_Receipt_Id VARCHAR(20) NOT NULL ,
t3_Time DATE NOT NULL ,
t3_Cost INTEGER NOT NULL ,
t3_Premium_Payment_Id VARCHAR(20) NOT NULL ,
t3_Cust_Id VARCHAR(20) NOT NULL ,
CONSTRAINT XPKRECEIPT_21 PRIMARY KEY (t3_Receipt_Id,t3_Premium_Payment_Id,t3_Cust_Id),
CONSTRAINT R_84 FOREIGN KEY (t3_Premium_Payment_Id, t3_Cust_Id)
REFERENCES t3_PREMIUM_PAYMENT (t3_Premium_Payment_Id, t3_Cust_Id) ON DELETE
CASCADE ON UPDATE CASCADE
);
CREATE UNIQUE INDEX XPKRECEIPT_21 ON t3_RECEIPT (t3_Receipt_Id ASC,t3_Premium_Payment_Id ASC,t3_Cust_Id ASC);
CREATE TABLE IF NOT EXISTS t3_APPLICATION
(
t3_Application_Id VARCHAR(20) NOT NULL ,
t3_Vehicle_Id VARCHAR(20) NOT NULL ,
t3_Application_Status CHAR(8) NOT NULL ,
t3_Coverage VARCHAR(50) NOT NULL ,
t3_Cust_Id VARCHAR(20) NOT NULL ,
CONSTRAINT XPKAPPLICATION_2 PRIMARY KEY (t3_Application_Id,t3_Cust_Id),
CONSTRAINT R_93 FOREIGN KEY (t3_Cust_Id) REFERENCES t3_CUSTOMER
(t3_Cust_Id) ON DELETE CASCADE ON UPDATE CASCADE
);
CREATE UNIQUE INDEX XPKAPPLICATION_2 ON t3_APPLICATION
(t3_Application_Id ASC,t3_Cust_Id ASC);


CREATE TABLE IF NOT EXISTS t3_INSURANCE_POLICY
(
t3_Agreement_id VARCHAR(20) NOT NULL ,
t3_Department_Name VARCHAR(20) NULL ,
t3_Policy_Number VARCHAR(20) NULL ,
t3_Start_Date DATE NULL ,
t3_Expiry_Date DATE NULL ,
t3_Term_Condition_Description VARCHAR(400) NULL ,
t3_Application_Id VARCHAR(20) NOT NULL ,
t3_Cust_Id VARCHAR(20) NOT NULL ,
CONSTRAINT XPKINSURANCE_POLICY_4 PRIMARY KEY
(t3_Agreement_id,t3_Application_Id,t3_Cust_Id),
CONSTRAINT R_95 FOREIGN KEY (t3_Application_Id, t3_Cust_Id) REFERENCES t3_APPLICATION
(t3_Application_Id, t3_Cust_Id) ON DELETE CASCADE ON UPDATE CASCADE
);
CREATE UNIQUE INDEX XPKINSURANCE_POLICY_4 ON t3_INSURANCE_POLICY
(t3_Agreement_id ASC,t3_Application_Id ASC,t3_Cust_Id ASC);


CREATE TABLE t3_POLICY_RENEWABLE
(
t3_Policy_Renewable_Id VARCHAR(20) NOT NULL ,
t3_Date_Of_Renewal DATE NOT NULL ,
t3_Type_Of_Renewal CHAR(15) NOT NULL ,
t3_Agreement_id VARCHAR(20) NOT NULL ,
t3_Application_Id VARCHAR(20) NOT NULL ,
t3_Cust_Id VARCHAR(20) NOT NULL ,
CONSTRAINT XPKPOLICY_RENEWABLE_16 PRIMARY KEY
(t3_Policy_Renewable_Id,t3_Agreement_id,t3_Application_Id,t3_Cust_Id),
CONSTRAINT R_101 FOREIGN KEY (t3_Agreement_id, t3_Application_Id, t3_Cust_Id)
REFERENCES t3_INSURANCE_POLICY (t3_Agreement_id, t3_Application_Id, t3_Cust_Id) ON DELETE
CASCADE ON UPDATE CASCADE
);
CREATE UNIQUE INDEX XPKPOLICY_RENEWABLE_16 ON
t3_POLICY_RENEWABLE
(t3_Policy_Renewable_Id ASC,t3_Agreement_id ASC,t3_Application_Id
ASC,t3_Cust_Id ASC);
```

```
CREATE TABLE IF NOT EXISTS t3_MEMBERSHIP
(
t3_Membership_Id VARCHAR(20) NOT NULL ,
t3_Membership_Type CHAR(15) NOT NULL ,
t3_Organisation_Contact VARCHAR(20) NULL ,
t3_Cust_Id VARCHAR(20) NOT NULL ,
CONSTRAINT XPKMEMBERSHIP_12 PRIMARY KEY
(t3_Membership_Id,t3_Cust_Id),
CONSTRAINT R_91 FOREIGN KEY (t3_Cust_Id) REFERENCES t3_CUSTOMER
(t3_Cust_Id) ON DELETE CASCADE ON UPDATE CASCADE
);
CREATE UNIQUE INDEX XPKMEMBERSHIP_12 ON t3_MEMBERSHIP
(t3_Membership_Id ASC,t3_Cust_Id ASC);


CREATE TABLE IF NOT EXISTS t3_QUOTE
(
t3_Quote_Id VARCHAR(20) NOT NULL ,
t3_Issue_Date DATE NOT NULL ,
t3_Valid_From_Date DATE NOT NULL ,
t3_Valid_Till_Date DATE NOT NULL ,
t3_Description VARCHAR(100) NULL ,
t3_Product_Id VARCHAR(20) NOT NULL ,
t3_Coverage_Level VARCHAR(20) NOT NULL ,
t3_Application_Id VARCHAR(20) NOT NULL ,
t3_Cust_Id VARCHAR(20) NOT NULL ,
CONSTRAINT XPKQUOTE_3 PRIMARY KEY
(t3_Quote_Id,t3_Application_Id,t3_Cust_Id),
CONSTRAINT R_94 FOREIGN KEY (t3_Application_Id, t3_Cust_Id) REFERENCES
t3_APPLICATION (t3_Application_Id, t3_Cust_Id) ON DELETE CASCADE ON UPDATE CASCADE
);
CREATE UNIQUE INDEX XPKQUOTE_3 ON t3_QUOTE
(t3_Quote_Id ASC,t3_Application_Id ASC,t3_Cust_Id ASC);


CREATE TABLE IF NOT EXISTS t3_STAFF
(
t3_Staff_Id VARCHAR(200) NOT NULL ,
t3_Staff_Fname VARCHAR(100) NULL ,
t3_Staff_LName VARCHAR(100) NULL ,
t3_Staff_Address VARCHAR(200) NULL ,
t3_Staff_Contact BIGINT NULL ,
t3_Staff_Gender CHAR(2) NULL ,
t3_Staff_Marital_Status CHAR(8) NULL ,
t3_Staff_Nationality CHAR(15) NULL ,
t3_Staff_Qualification VARCHAR(20) NULL ,
t3_Staff_Allowance bigint NULL ,
t3_Staff_PPS_Number bigint NULL ,
t3_Company_Name VARCHAR(400) NOT NULL ,
CONSTRAINT XPKSTAFF_9 PRIMARY KEY (t3_Staff_Id,t3_Company_Name),
CONSTRAINT R_105 FOREIGN KEY (t3_Company_Name) REFERENCES
t3_INSURANCE_COMPANY (t3_Company_Name) ON DELETE CASCADE ON UPDATE CASCADE
);
```

```
CREATE UNIQUE INDEX XPKSTAFF_9 ON t3_STAFF (t3_Staff_Id ASC,t3_Company_Name ASC);
```

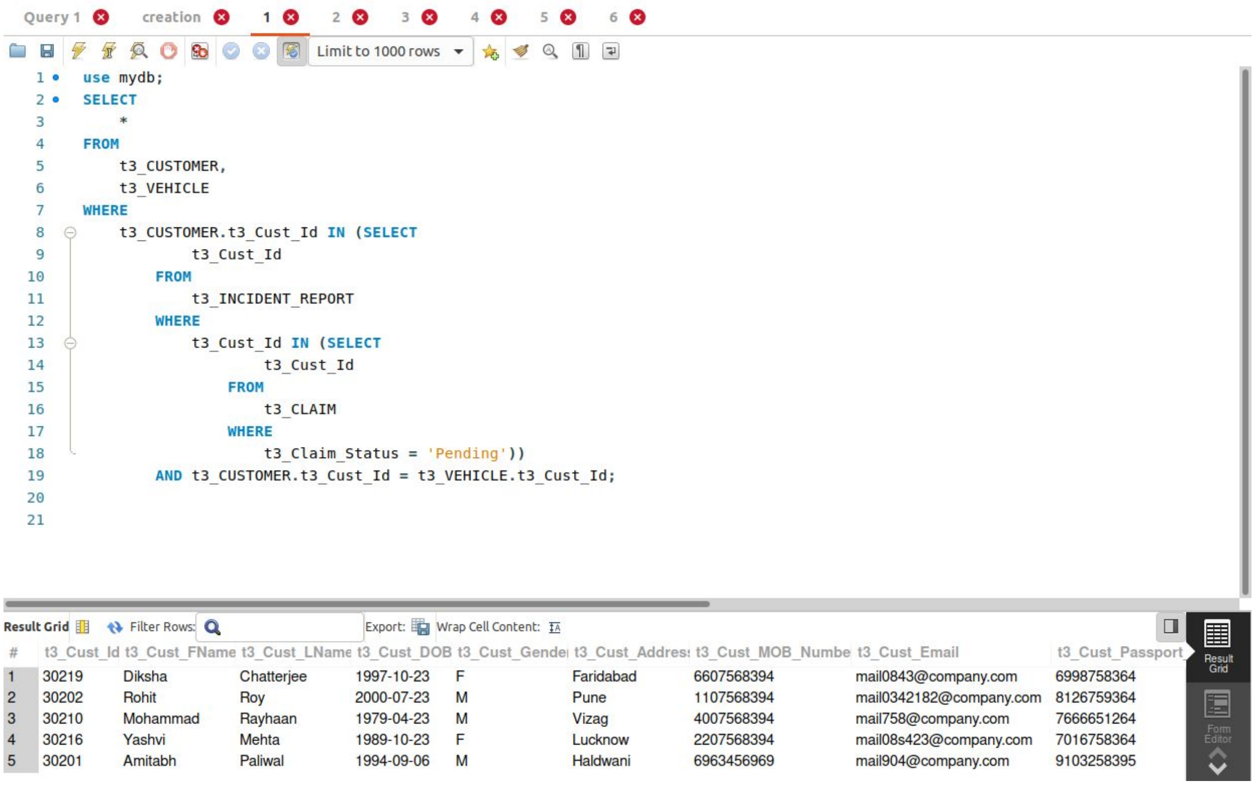
```
CREATE TABLE t3_NOK
(
t3_Nok_Id VARCHAR(20) NOT NULL ,
t3_Nok_Name VARCHAR(20) NULL ,
t3_Nok_Address VARCHAR(200) NULL ,
t3_Nok_Phone_Number BIGINT NULL ,
t3_Nok_Gender CHAR(10) NULL ,
t3_Nok_Marital_Status CHAR(8) NULL ,
t3_Agreement_id VARCHAR(20) NOT NULL ,
t3_Application_Id VARCHAR(20) NOT NULL ,
t3_Cust_Id VARCHAR(20) NOT NULL ,
CONSTRAINT XPKNOK_14 PRIMARY KEY
(t3_Nok_Id,t3_Agreement_id,t3_Application_Id,t3_Cust_Id),
CONSTRAINT R_99 FOREIGN KEY (t3_Agreement_id, t3_Application_Id, t3_Cust_Id)
REFERENCES t3_INSURANCE_POLICY (t3_Agreement_id, t3_Application_Id, t3_Cust_Id) ON DELETE
CASCADE ON UPDATE CASCADE
);
CREATE UNIQUE INDEX XPKNOK_14 ON t3_NOK (t3_Nok_Id ASC,t3_Agreement_id ASC,t3_Application_Id ASC);
```

```
CREATE TABLE IF NOT EXISTS t3_PRODUCT
(
t3_Product_Number VARCHAR(200) NOT NULL ,
t3_Product_Price INTEGER NULL ,
t3_Product_Type CHAR(40) NULL ,
t3_Company_Name VARCHAR(200) NOT NULL ,
CONSTRAINT XPKPRODUCT_20 PRIMARY KEY (t3_Product_Number,t3_Company_Name),
CONSTRAINT R_107 FOREIGN KEY (t3_Company_Name) REFERENCES t3_INSURANCE_COMPANY
(t3_Company_Name) ON DELETE CASCADE ON UPDATE CASCADE
);
CREATE UNIQUE INDEX XPKPRODUCT_20 ON t3_PRODUCT (t3_Product_Number ASC,t3_Company_Name ASC);


CREATE TABLE IF NOT EXISTS t3_OFFICE
(
t3_Office_Name VARCHAR(200) NOT NULL ,
t3_Office_Leader VARCHAR(200) NOT NULL ,
t3_Contact_Information VARCHAR(200) NOT NULL ,
t3_Address VARCHAR(200) NOT NULL ,
t3_Admin_Cost INTEGER NULL ,
t3_Staff VARCHAR(50) NULL ,
t3_Department_Name VARCHAR(200) NOT NULL ,
t3_Department_ID VARCHAR(200) NOT NULL,
t3_Company_Name VARCHAR(200) NOT NULL ,
CONSTRAINT XPKOFFICE_11 PRIMARY
KEY(t3_Office_Name,t3_Department_Name,t3_Company_Name),
CONSTRAINT R_104 FOREIGN KEY (t3_Department_Name,t3_Department_ID,t3_Company_Name)
REFERENCES t3_DEPARTMENT (t3_Department_Name,t3_Department_ID,t3_Company_Name) ON
DELETE CASCADE ON UPDATE CASCADE
);
CREATE UNIQUE INDEX XPKOFFICE_11 ON t3_OFFICE (t3_Office_Name ASC,t3_Department_Name ASC,t3_Company_Name ASC);
CREATE TABLE IF NOT EXISTS t3_COVERAGE
(
t3_Coverage_Id VARCHAR(20) NOT NULL ,
t3_Coverage_Amount INTEGER NOT NULL ,
t3_Coverage_Type CHAR(30) NOT NULL ,
t3_Coverage_Level CHAR(30) NOT NULL ,
t3_Product_Id VARCHAR(30) NOT NULL ,
t3_Coverage_Description VARCHAR(400) NULL ,
t3_Coverage_Terms VARCHAR(50) NULL ,
t3_Company_Name VARCHAR(400) NOT NULL ,
CONSTRAINT XPKCOVERAGE_19  PRIMARY KEY
(t3_Coverage_Id,t3_Company_Name),
CONSTRAINT R_102 FOREIGN KEY (t3_Company_Name) REFERENCES
t3_INSURANCE_COMPANY (t3_Company_Name) ON DELETE CASCADE ON UPDATE CASCADE
);
CREATE UNIQUE INDEX XPKCOVERAGE_19 ON t3_COVERAGE
(t3_Coverage_Id ASC,t3_Company_Name ASC);


CREATE TABLE IF NOT EXISTS t3_INSURANCE_POLICY_COVERAGE
(
t3_Agreement_id VARCHAR(20) NOT NULL ,
t3_Application_Id VARCHAR(20) NOT NULL ,
t3_Cust_Id VARCHAR(20) NOT NULL ,
t3_Coverage_Id VARCHAR(20) NOT NULL ,
t3_Company_Name VARCHAR(200) NOT NULL ,
CONSTRAINT XPKINSURANCE_POLICY_4_COVERAGE PRIMARY KEY
(t3_Agreement_id,t3_Application_Id,t3_Cust_Id,t3_Coverage_Id,t3_Company_Name),
CONSTRAINT R_97 FOREIGN KEY (t3_Agreement_id, t3_Application_Id, t3_Cust_Id)
REFERENCES t3_INSURANCE_POLICY (t3_Agreement_id, t3_Application_Id, t3_Cust_Id) ON DELETE
CASCADE ON UPDATE CASCADE,
CONSTRAINT R_98 FOREIGN KEY (t3_Coverage_Id, t3_Company_Name)
REFERENCES t3_COVERAGE (t3_Coverage_Id, t3_Company_Name) ON DELETE CASCADE ON
UPDATE CASCADE
);
CREATE UNIQUE INDEX XPKINSURANCE_POLICY_4_COVERAGE ON
t3_INSURANCE_POLICY_COVERAGE
(t3_Agreement_id ASC,t3_Application_Id ASC,t3_Cust_Id ASC,t3_Coverage_Id
ASC,t3_Company_Name ASC);


CREATE TABLE IF NOT EXISTS t3_CLAIM
(
t3_Claim_Id VARCHAR(20) NOT NULL ,
t3_Agreement_id VARCHAR(20) NOT NULL ,
t3_Claim_Amount INTEGER NOT NULL ,
t3_Incident_Id VARCHAR(20) NOT NULL ,
t3_Damage_Type VARCHAR(20) NOT NULL ,
t3_Date_Of_Claim DATE NOT NULL ,
t3_Claim_Status CHAR(10) NOT NULL ,
t3_Cust_Id VARCHAR(20) NOT NULL ,
CONSTRAINT XPKCLAIM_7 PRIMARY KEY (t3_Claim_Id,t3_Cust_Id),
CONSTRAINT R_88 FOREIGN KEY (t3_Cust_Id) REFERENCES t3_CUSTOMER
(t3_Cust_Id) ON DELETE CASCADE ON UPDATE CASCADE
);
CREATE UNIQUE INDEX XPKCLAIM_7 ON t3_CLAIM
(t3_Claim_Id ASC,t3_Cust_Id ASC);


CREATE TABLE IF NOT EXISTS t3_CLAIM_SETTLEMENT
(
t3_Claim_Settlement_Id VARCHAR(20) NOT NULL ,
t3_Vehicle_Id VARCHAR(20) NOT NULL ,
t3_Date_Settled DATE NOT NULL ,
t3_Amount_Paid INTEGER NOT NULL ,
t3_Coverage_Id VARCHAR(20) NOT NULL ,
t3_Claim_Id VARCHAR(20) NOT NULL ,
t3_Cust_Id VARCHAR(20) NOT NULL ,
CONSTRAINT XPKCLAIM_SETTLEMENT_8 PRIMARY KEY
(t3_Claim_Settlement_Id,t3_Claim_Id,t3_Cust_Id),
CONSTRAINT R_90 FOREIGN KEY (t3_Claim_Id, t3_Cust_Id) REFERENCES t3_CLAIM
(t3_Claim_Id, t3_Cust_Id) ON DELETE CASCADE ON UPDATE CASCADE
);
CREATE UNIQUE INDEX XPKCLAIM_SETTLEMENT_8 ON
t3_CLAIM_SETTLEMENT
(t3_Claim_Settlement_Id ASC,t3_Claim_Id ASC,t3_Cust_Id ASC);
```

## TESTING QUERY 1

```sql
use mydb;
SELECT
    *
FROM
    t3_CUSTOMER,
    t3_VEHICLE
WHERE
    t3_CUSTOMER.t3_Cust_Id IN (SELECT
    t3_Cust_Id
    FROM
    t3_INCIDENT_REPORT
    WHERE
    t3_Cust_Id IN (SELECT
        t3_Cust_Id
    FROM
        t3_CLAIM
    WHERE
        t3_Claim_Status = 'Pending'))
    AND t3_CUSTOMER.t3_Cust_Id = t3_VEHICLE.t3_Cust_Id;
```

## OUTPUT QUERY 1



```sql
use mydb;
SELECT
    *
FROM
    t3_CUSTOMER,
    t3_VEHICLE
WHERE
    t3_CUSTOMER.t3_Cust_Id IN (SELECT
            t3_Cust_Id
        FROM
            t3_INCIDENT_REPORT
        WHERE
            t3_Cust_Id IN (SELECT
                    t3_Cust_Id
                FROM
                    t3_CLAIM
                WHERE
                    t3_Claim_Status = 'Pending'))
        AND t3_CUSTOMER.t3_Cust_Id = t3_VEHICLE.t3_Cust_Id;
```

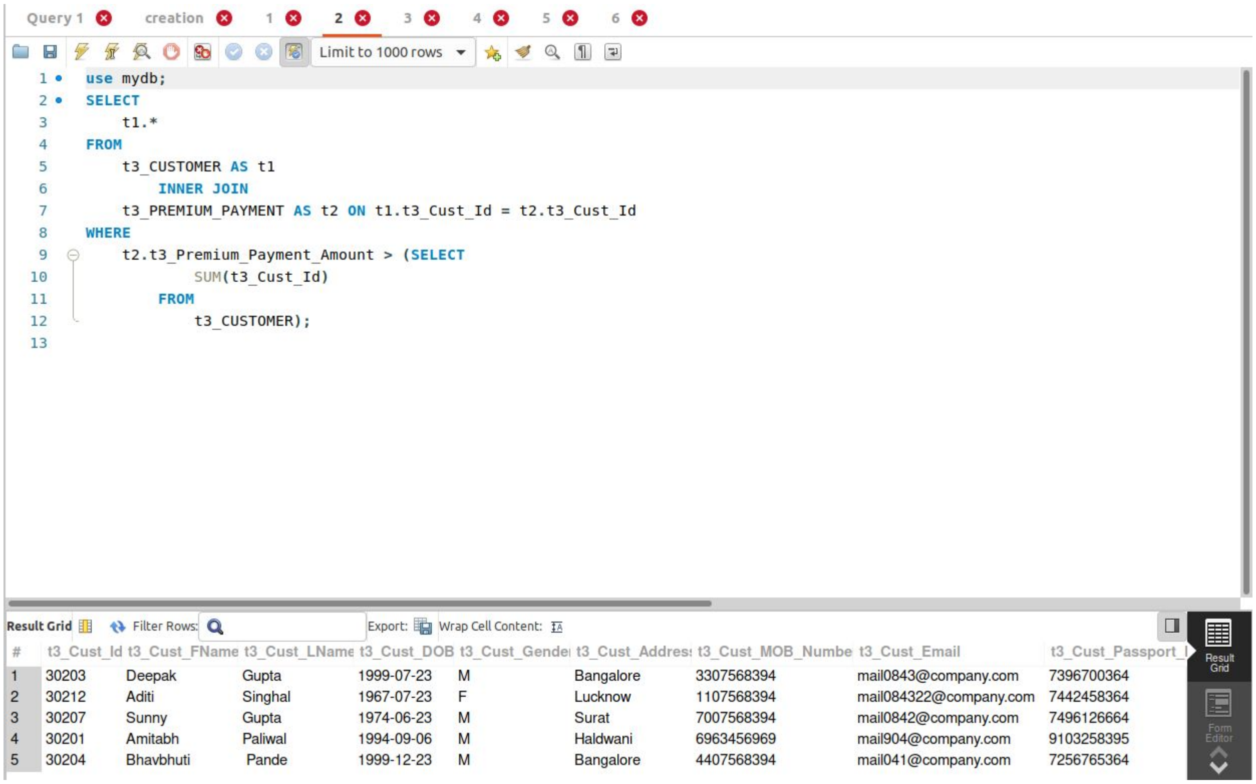
| # | t3_Cust_Id | t3_Cust_FName | t3_Cust_LName | t3_Cust_DOB | t3_Cust_Gende | t3_Cust_Addres | t3_Cust_MOB_Numbe | t3_Cust_Email | t3_Cust_Passport |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 30219 | Diksha | Chatterjee | 1997-10-23 | F | Faridabad | 6607568394 | mail0843@company.com | 6998758364 |
| 2 | 30202 | Rohit | Roy | 2000-07-23 | M | Pune | 1107568394 | mail0342182@company.com | 8126759364 |
| 3 | 30210 | Mohammad | Rayhaan | 1979-04-23 | M | Vizag | 4007568394 | mail758@company.com | 7666651264 |
| 4 | 30216 | Yashvi | Mehta | 1989-10-23 | F | Lucknow | 2207568394 | mail08s423@company.com | 7016758364 |
| 5 | 30201 | Amitabh | Paliwal | 1994-09-06 | M | Haldwani | 6963456969 | mail904@company.com | 9103258395 |

## TESTING QUERY 2

```sql
use mydb;

SELECT

        t1.*

FROM

        t3_CUSTOMER AS t1

        INNER JOIN

        t3_PREMIUM_PAYMENT AS t2 ON t1.t3_Cust_Id = t2.t3_Cust_Id

WHERE
```

```
    t2.t3_Premium_Payment_Amount > (SELECT

    SUM(t3_Cust_Id)

    FROM

    t3_CUSTOMER);
```

## OUTPUT QUERY 2



```
use mydb;
SELECT
    t1.*
FROM
    t3_CUSTOMER AS t1
        INNER JOIN
    t3_PREMIUM_PAYMENT AS t2 ON t1.t3_Cust_Id = t2.t3_Cust_Id
WHERE
    t2.t3_Premium_Payment_Amount > (SELECT
            SUM(t3_Cust_Id)
        FROM
            t3_CUSTOMER);
```

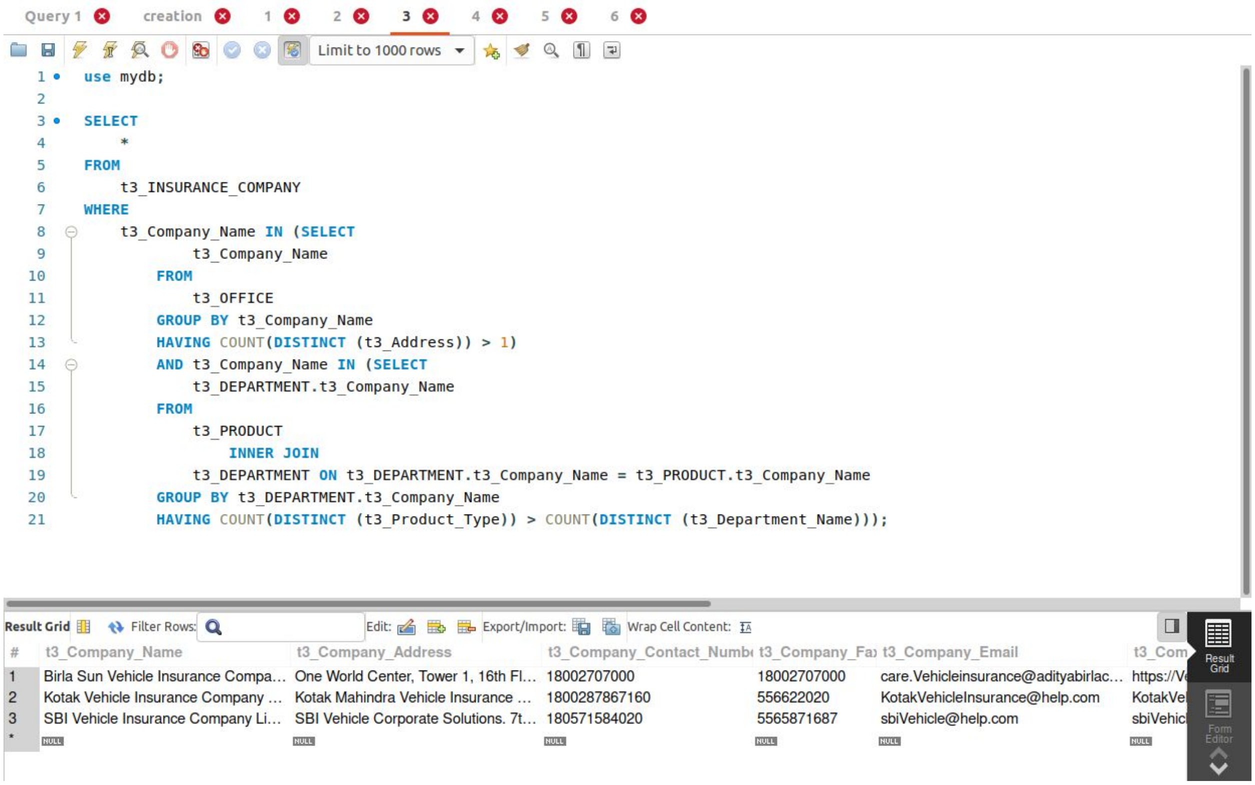
| # | t3_Cust_Id | t3_Cust_FName | t3_Cust_LName | t3_Cust_DOB | t3_Cust_Gende | t3_Cust_Addres | t3_Cust_MOB_Numbe | t3_Cust_Email | t3_Cust_Passport_ |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 30203 | Deepak | Gupta | 1999-07-23 | M | Bangalore | 3307568394 | mail0843@company.com | 7396700364 |
| 2 | 30212 | Aditi | Singhal | 1967-07-23 | F | Lucknow | 1107568394 | mail084322@company.com | 7442458364 |
| 3 | 30207 | Sunny | Gupta | 1974-06-23 | M | Surat | 7007568394 | mail0842@company.com | 7496126664 |
| 4 | 30201 | Amitabh | Paliwal | 1994-09-06 | M | Haldwani | 6963456969 | mail904@company.com | 9103258395 |
| 5 | 30204 | Bhavbhuti | Pande | 1999-12-23 | M | Bangalore | 4407568394 | mail041@company.com | 7256765364 |

## TESTING QUERY 3

```
use mydb;


SELECT

    *

FROM
```

```
        t3_INSURANCE_COMPANY
WHERE
        t3_Company_Name IN (SELECT
        t3_Company_Name
        FROM
        t3_OFFICE
        GROUP BY t3_Company_Name
        HAVING COUNT(DISTINCT (t3_Address)) > 1)
        AND t3_Company_Name IN (SELECT
        t3_DEPARTMENT.t3_Company_Name
        FROM
        t3_PRODUCT
        INNER JOIN
        t3_DEPARTMENT ON t3_DEPARTMENT.t3_Company_Name =
t3_PRODUCT.t3_Company_Name
        GROUP BY t3_DEPARTMENT.t3_Company_Name
        HAVING COUNT(DISTINCT (t3_Product_Type)) > COUNT(DISTINCT (t3_Department_Name)));
```

## OUTPUT QUERY 3



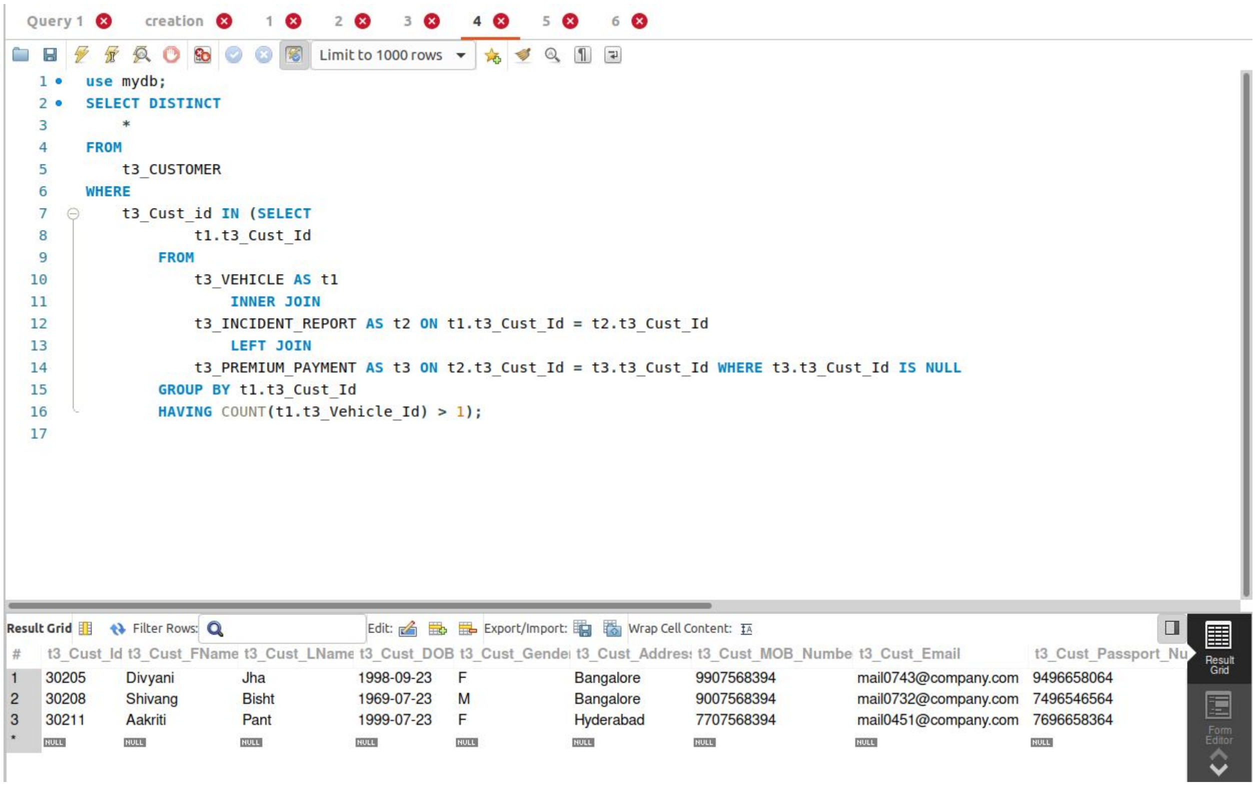
```
use mydb;

SELECT
    *
FROM
    t3_INSURANCE_COMPANY
WHERE
    t3_Company_Name IN (SELECT
            t3_Company_Name
        FROM
            t3_OFFICE
        GROUP BY t3_Company_Name
        HAVING COUNT(DISTINCT (t3_Address)) > 1)
        AND t3_Company_Name IN (SELECT
            t3_DEPARTMENT.t3_Company_Name
        FROM
            t3_PRODUCT
                INNER JOIN
            t3_DEPARTMENT ON t3_DEPARTMENT.t3_Company_Name = t3_PRODUCT.t3_Company_Name
        GROUP BY t3_DEPARTMENT.t3_Company_Name
        HAVING COUNT(DISTINCT (t3_Product_Type)) > COUNT(DISTINCT (t3_Department_Name)));
```

| # | t3_Company_Name | t3_Company_Address | t3_Company_Contact_Numb | t3_Company_Fa | t3_Company_Email | t3_Com |
|---|---|---|---|---|---|---|
| 1 | Birla Sun Vehicle Insurance Compa... | One World Center, Tower 1, 16th Fl... | 18002707000 | 18002707000 | care.Vehicleinsurance@adityabirlac... | https://Ve |
| 2 | Kotak Vehicle Insurance Company ... | Kotak Mahindra Vehicle Insurance ... | 1800287867160 | 556622020 | KotakVehicleInsurance@help.com | KotakVe |
| 3 | SBI Vehicle Insurance Company Li... | SBI Vehicle Corporate Solutions. 7t... | 180571584020 | 5565871687 | sbiVehicle@help.com | sbiVehic |
| * | NULL | NULL | NULL | NULL | NULL | NULL |

## TESTING QUERY 4

```
use mydb;

SELECT DISTINCT

        *

FROM

        t3_CUSTOMER

WHERE

        t3_Cust_id IN (SELECT

        t1.t3_Cust_Id

        FROM

        t3_VEHICLE AS t1

        INNER JOIN
        t3_INCIDENT_REPORT AS t2 ON t1.t3_Cust_Id = t2.t3_Cust_Id
        LEFT JOIN
        t3_PREMIUM_PAYMENT AS t3 ON t2.t3_Cust_Id = t3.t3_Cust_Id WHERE t3.t3_Cust_Id IS NULL
        GROUP BY t1.t3_Cust_Id
        HAVING COUNT(t1.t3_Vehicle_Id) > 1);
```

## OUTPUT QUERY 4



```
use mydb;
SELECT DISTINCT
    *
FROM
    t3_CUSTOMER
WHERE
    t3_Cust_id IN (SELECT
            t1.t3_Cust_Id
        FROM
            t3_VEHICLE AS t1
                INNER JOIN
            t3_INCIDENT_REPORT AS t2 ON t1.t3_Cust_Id = t2.t3_Cust_Id
                LEFT JOIN
            t3_PREMIUM_PAYMENT AS t3 ON t2.t3_Cust_Id = t3.t3_Cust_Id WHERE t3.t3_Cust_Id IS NULL
        GROUP BY t1.t3_Cust_Id
        HAVING COUNT(t1.t3_Vehicle_Id) > 1);
```

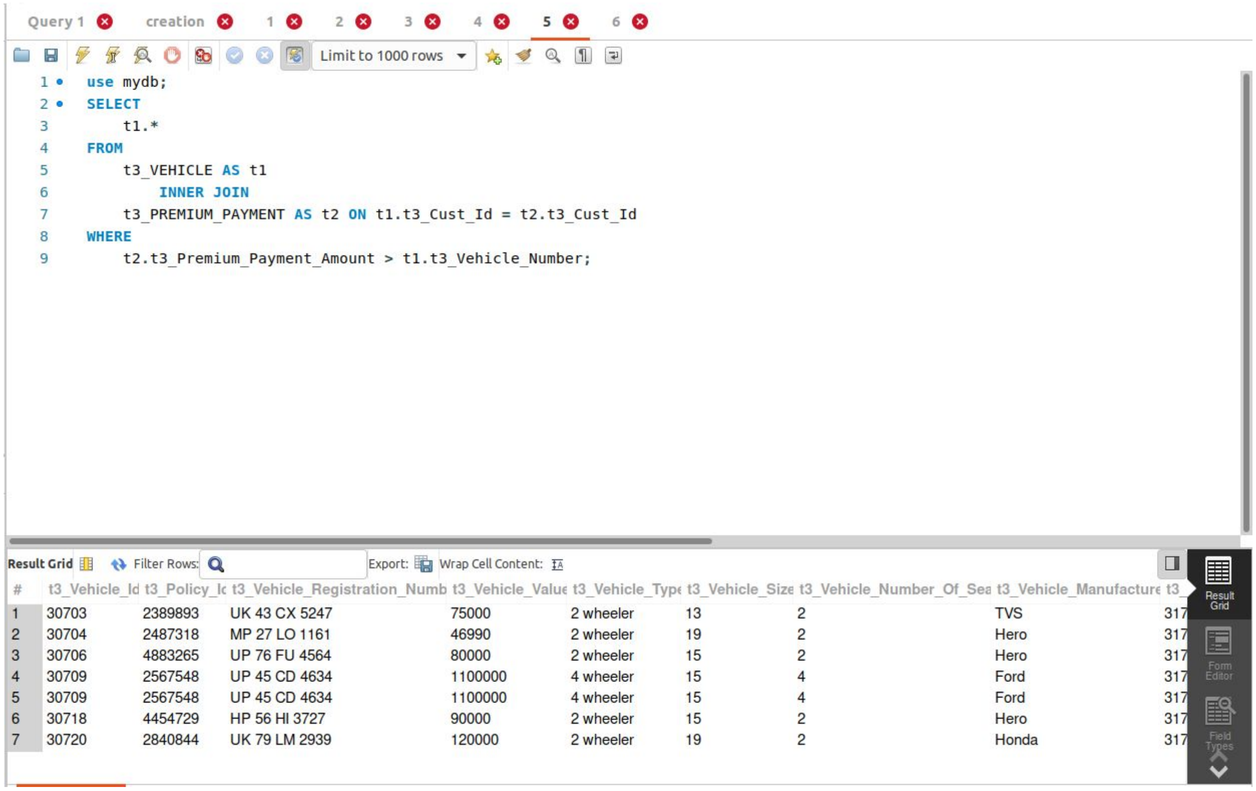
| # | t3_Cust_Id | t3_Cust_FName | t3_Cust_LName | t3_Cust_DOB | t3_Cust_Gende | t3_Cust_Addres | t3_Cust_MOB_Numbe | t3_Cust_Email | t3_Cust_Passport_Nu |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 30205 | Divyani | Jha | 1998-09-23 | F | Bangalore | 9907568394 | mail0743@company.com | 9496658064 |
| 2 | 30208 | Shivang | Bisht | 1969-07-23 | M | Bangalore | 9007568394 | mail0732@company.com | 7496546564 |
| 3 | 30211 | Aakriti | Pant | 1999-07-23 | F | Hyderabad | 7707568394 | mail0451@company.com | 7696658364 |
| * | NULL | NULL | NULL | NULL | NULL | NULL | NULL | NULL | NULL |

## TESTING QUERY 5

```
use mydb;

SELECT

        t1.*
```

```
FROM

        t3_VEHICLE AS t1

         INNER JOIN

        t3_PREMIUM_PAYMENT AS t2 ON t1.t3_Cust_Id = t2.t3_Cust_Id

WHERE

        t2.t3_Premium_Payment_Amount > t1.t3_Vehicle_Number;
```

## OUTPUT QUERY 5



```
use mydb;
SELECT
    t1.*
FROM
    t3_VEHICLE AS t1
        INNER JOIN
    t3_PREMIUM_PAYMENT AS t2 ON t1.t3_Cust_Id = t2.t3_Cust_Id
WHERE
    t2.t3_Premium_Payment_Amount > t1.t3_Vehicle_Number;
```

| # | t3_Vehicle_Id | t3_Policy_Ic | t3_Vehicle_Registration_Numb | t3_Vehicle_Value | t3_Vehicle_Type | t3_Vehicle_Size | t3_Vehicle_Number_Of_Sea | t3_Vehicle_Manufacture | t3_ |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 30703 | 2389893 | UK 43 CX 5247 | 75000 | 2 wheeler | 13 | 2 | TVS | 317 |
| 2 | 30704 | 2487318 | MP 27 LO 1161 | 46990 | 2 wheeler | 19 | 2 | Hero | 317 |
| 3 | 30706 | 4883265 | UP 76 FU 4564 | 80000 | 2 wheeler | 15 | 2 | Hero | 317 |
| 4 | 30709 | 2567548 | UP 45 CD 4634 | 1100000 | 4 wheeler | 15 | 4 | Ford | 317 |
| 5 | 30709 | 2567548 | UP 45 CD 4634 | 1100000 | 4 wheeler | 15 | 4 | Ford | 317 |
| 6 | 30718 | 4454729 | HP 56 HI 3727 | 90000 | 2 wheeler | 15 | 2 | Hero | 317 |
| 7 | 30720 | 2840844 | UK 79 LM 2939 | 120000 | 2 wheeler | 19 | 2 | Honda | 317 |

## TESTING QUERY 6

```
use mydb;

SELECT DISTINCT

        t1.*
```

FROM

t3_COVERAGE AS t2,

t3_CLAIM_SETTLEMENT AS t3,

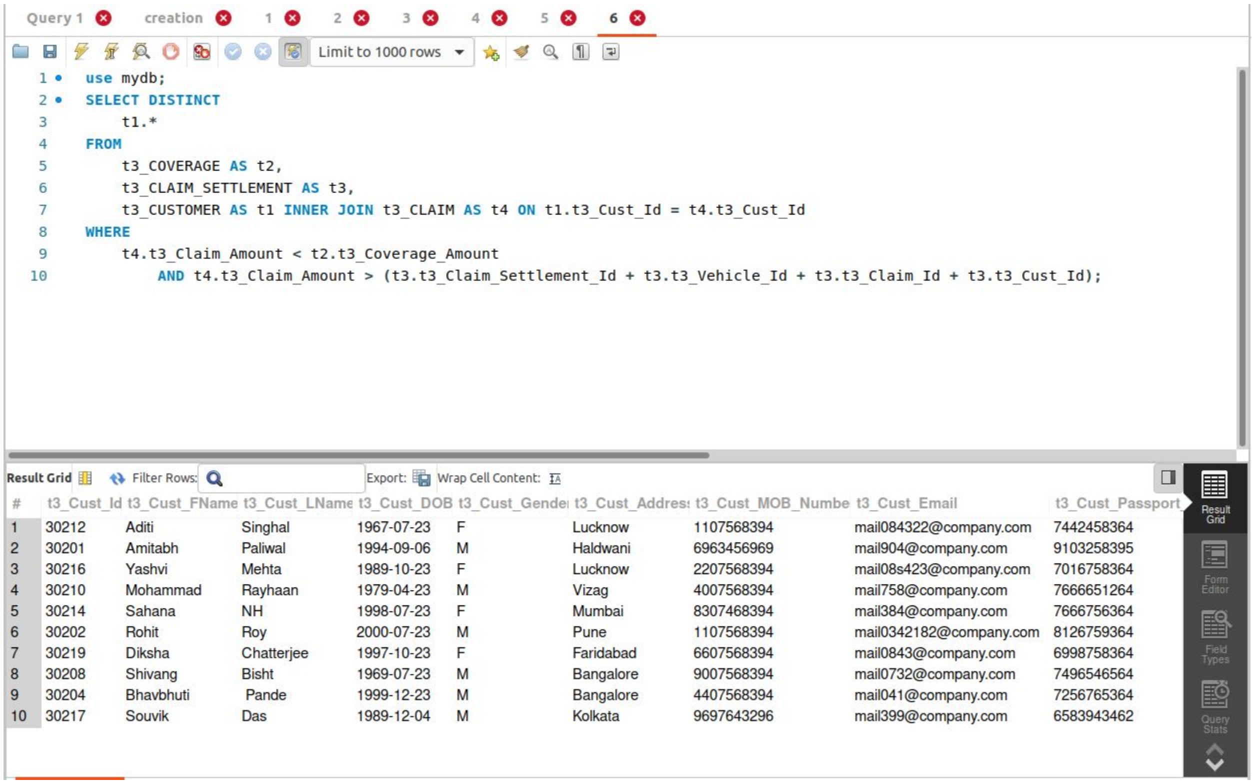
t3_CUSTOMER AS t1 INNER JOIN t3_CLAIM AS t4 ON t1.t3_Cust_Id = t4.t3_Cust_Id

WHERE

t4.t3_Claim_Amount < t2.t3_Coverage_Amount

AND t4.t3_Claim_Amount > (t3.t3_Claim_Settlement_Id + t3.t3_Vehicle_Id + t3.t3_Claim_Id + t3.t3_Cust_Id);

## OUTPUT QUERY 6



```
use mydb;
SELECT DISTINCT
    t1.*
FROM
    t3_COVERAGE AS t2,
    t3_CLAIM_SETTLEMENT AS t3,
    t3_CUSTOMER AS t1 INNER JOIN t3_CLAIM AS t4 ON t1.t3_Cust_Id = t4.t3_Cust_Id
WHERE
    t4.t3_Claim_Amount < t2.t3_Coverage_Amount
        AND t4.t3_Claim_Amount > (t3.t3_Claim_Settlement_Id + t3.t3_Vehicle_Id + t3.t3_Claim_Id + t3.t3_Cust_Id);
```

| # | t3_Cust_Id | t3_Cust_FName | t3_Cust_LName | t3_Cust_DOB | t3_Cust_Gende | t3_Cust_Addres | t3_Cust_MOB_Numbe | t3_Cust_Email | t3_Cust_Passport |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 30212 | Aditi | Singhal | 1967-07-23 | F | Lucknow | 1107568394 | mail084322@company.com | 7442458364 |
| 2 | 30201 | Amitabh | Paliwal | 1994-09-06 | M | Haldwani | 6963456969 | mail904@company.com | 9103258395 |
| 3 | 30216 | Yashvi | Mehta | 1989-10-23 | F | Lucknow | 2207568394 | mail08s423@company.com | 7016758364 |
| 4 | 30210 | Mohammad | Rayhaan | 1979-04-23 | M | Vizag | 4007568394 | mail758@company.com | 7666651264 |
| 5 | 30214 | Sahana | NH | 1998-07-23 | F | Mumbai | 8307468394 | mail384@company.com | 7666756364 |
| 6 | 30202 | Rohit | Roy | 2000-07-23 | M | Pune | 1107568394 | mail0342182@company.com | 8126759364 |
| 7 | 30219 | Diksha | Chatterjee | 1997-10-23 | F | Faridabad | 6607568394 | mail0843@company.com | 6998758364 |
| 8 | 30208 | Shivang | Bisht | 1969-07-23 | M | Bangalore | 9007568394 | mail0732@company.com | 7496546564 |
| 9 | 30204 | Bhavbhuti | Pande | 1999-12-23 | M | Bangalore | 4407568394 | mail041@company.com | 7256765364 |
| 10 | 30217 | Souvik | Das | 1989-12-04 | M | Kolkata | 9697643296 | mail399@company.com | 6583943462 |

## Conclusion

We have a class project created database (DB) with all documentations and reports included. Our goal was to create a DB for Online vehicle insurance companies with code generated for MySQL workbench. There were some big and small challenges but we succeeded in making a functional DB. We started to build conceptual data models (CDM) , we continued with logical data models (LDM) and then we made physical data models (PDM). From the physical data model we created a code to be run in MySQL database management system (DBMS). For better understanding for a reader and for our learning we included some theory in each phase we did and documented in the project initial document (PID) with reports of progress and work being done.