

DATABASE MANAGEMENT SYSTEM (CS310)

Report on

Database design on Car vehicle insurance company

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GITHUB REPOSITORY LINK:

https://github.com/vedant-jad99/DBMS_Group_Project

PROJECT TITLE:

A database for a Vehicle Insurance Company.

PURPOSE:

This module provides a comprehensive discussion of, and practical experience in, advanced entity modelling; normalisation; transactional relational database design; SQL coding; and generation of data backed management reports.

PROJECT BENEFITS:

To make a good DB, that could be used with analytical tools and faster in delivering the right data at the right time for better decision making.

ASSUMPTION:

- The Foreign Key of office table (table 18) has been changed to (Department_Name,Department_ID,Company_Name)
 Referencing the Primary Key of the Department Table(table 5).
- The Foreign Key of Department Table (table 5) has been changed to (Company Name) referencing the Primary Key of Insurance Company Table

QUERY 1

Retrieve Customer and Vehicle details who has been involved in an incident and claim status is pending

```
SELECT

*

FROM

T5_Customer,

T5_Vehicle

WHERE

T5_Customer.cust_id = T5_Vehicle.cust_id

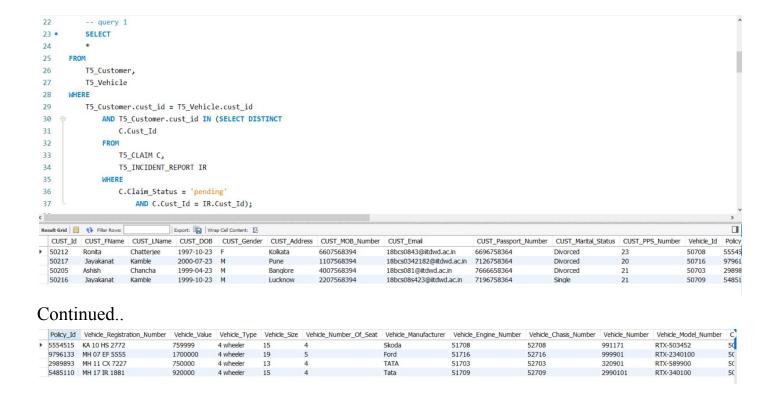
AND T5_Customer.cust_id IN (SELECT DISTINCT

C.Cust_Id

FROM

T5_CLAIM C,
```

T5_INCIDENT_REPORT IR WHERE C.Claim_Status = 'pending' AND C.Cust Id = IR.Cust Id);

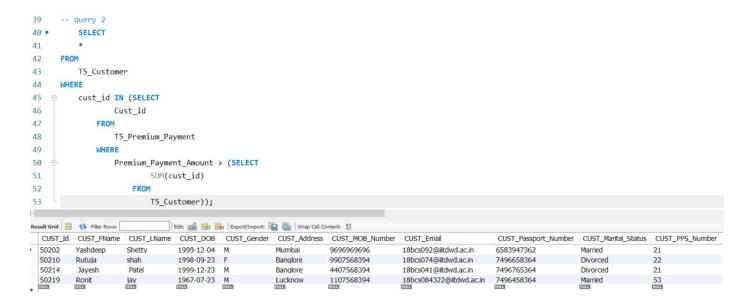


QUERY 2

Retrieve customer details who has premium payment amount greater than the sum of all the customerIds in the database

```
*
FROM
T5_Customer
WHERE
cust_id IN (SELECT
Cust_id
FROM
```

```
T5_Premium_Payment
WHERE
Premium_Payment_Amount > (SELECT
SUM(cust_id)
FROM
T5_Customer));
```



QUERY 3

Retrieve Company details whose number of products is greater than departments, where the departments are located in more than one location.

```
FROM
T5_Insurance_Company
WHERE
Company_Name IN (SELECT
T5_Office.Company_Name
FROM
T5_Office
GROUP BY Company_Name
HAVING COUNT(DISTINCT (address)) > 1
AND Company_Name IN (SELECT
T5_Department.Company_Name
```

```
FROM
T5_Product
INNER JOIN
T5_Department ON T5_Department.Company_Name =
T5_Product.Company_Name
GROUP BY T5_Department.Company_Name
HAVING COUNT(DISTINCT (Product_Type)) > COUNT(DISTINCT (Department_Name))));
```



QUERY 4

Select Customers who have more than one Vehicle, where the premium for one of the Vehicles is not paid and it is involved in accident

```
SELECT

*

FROM

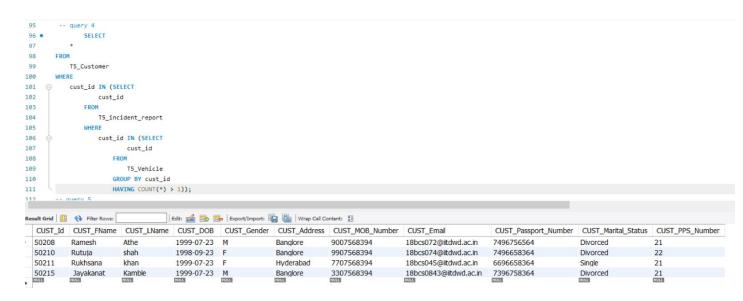
T5_Customer

WHERE

cust_id IN (SELECT

cust_id
```

```
FROM
T5_incident_report
WHERE
cust_id IN (SELECT
cust_id
FROM
T5_Vehicle
GROUP BY cust_id
HAVING COUNT(*) > 1));
```



ALTERNATIVELY

ASSUMPTION: If a customer_id is present in the premium_payment table, it means they have paid their premium.

```
SELECT

*
FROM

t5_customer
WHERE

Cust_id IN (SELECT

t1.Cust_Id
```

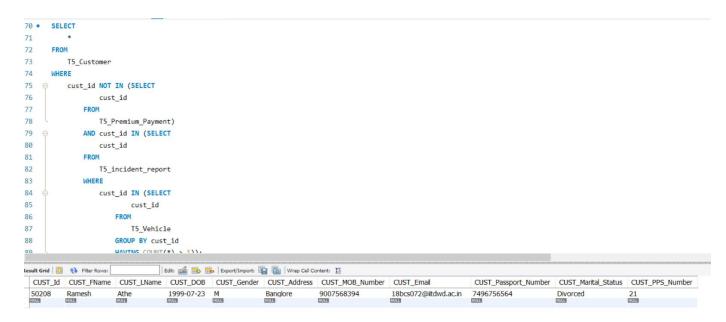
```
FROM
    t5_vehicle AS t1
        INNER JOIN
    t5_incident_report AS t2 ON t1.Cust_Id = t2.Cust_Id
        LEFT JOIN
    t5_premium_payment AS t3 ON t2.Cust_Id = t3.Cust_Id
WHERE
    t3.Cust_Id IS NULL
GROUP BY t1.Cust_Id
HAVING COUNT(t1.Vehicle_Id) > 1);
```

```
51
      -- query 4
52 • SELECT
53
54 FROM
55
         t5_customer
    WHERE
57 ⊝ Cust_id IN (SELECT
58
               t1.Cust_Id
59
            FROM
60
                t5_vehicle AS t1
                    INNER JOIN
               t5_incident_report AS t2 ON t1.Cust_Id = t2.Cust_Id
62
                t5_premium_payment AS t3 ON t2.Cust_Id = t3.Cust_Id
65
66
               t3.Cust_Id IS NULL
             GROUP BY t1.Cust_Id
67
      HAVING COUNT(t1.Vehicle_Id) > 1);
Result Grid | 🔢 🛟 Filter Rows: | Edit: 🕍 📆 🖶 | Export/Import: 📳 📸 | Wrap Cell Content: 🏗
 CUST_Id CUST_FName CUST_LName CUST_DOB CUST_Gender CUST_Address CUST_MOB_Number CUST_Email
                                                                                                    CUST_Passport_Number CUST_Marital_Status CUST_PPS_Number
                                                                                                    7496756564
                                                                  9007568394
 50208 Ramesh Athe
                                1999-07-23 M Banglore
                                                                                  18bcs072@itdwd.ac.in
```

OR

```
FROM
T5_Customer
WHERE
cust_id NOT IN (SELECT
cust_id
FROM
T5_Premium_Payment)
```

```
AND cust_id IN (SELECT
cust_id
FROM
T5_incident_report
WHERE
cust_id IN (SELECT
cust_id
FROM
T5_Vehicle
GROUP BY cust_id
HAVING COUNT(*) > 1));
```



NOTE: For the purposes of showing output of the above queries, one customer_id was deleted from premium_payment table to show they have not paid their premium.

QUERY 5

Select all vehicles which have a premium more than its vehicle number.

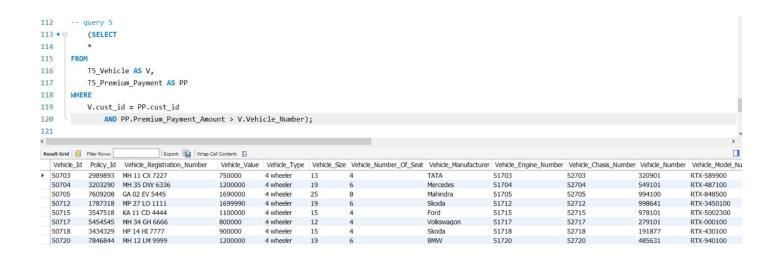
(SELECT

FROM

T5_Vehicle AS V, T5_Premium_Payment AS PP WHERE

V.cust_id = PP.cust_id

AND PP.Premium_Payment_Amount > V.Vehicle_Number);



Continued...

ut	facturer	Vehicle_Engine_Number	Vehicle_Chasis_Number	Vehicle_Number	Vehicle_Model_Number	Cust_Id	Premium_Payment_Id	Policy_Number	Premium_Payment_Amount	Premium_Payment_Schedule	Receipt_Id	Cust_Id
		51703	52703	320901	RTX-589900	50205	50805	3434235	520000	2018-04-13	50905	50205
		51704	52704	549101	RTX-487100	50202	50802	34423423	5200000	2019-11-20	50902	50202
		51705	52705	994100	RTX-848500	50210	50810	534324	2800000	2019-01-23	50910	50210
		51712	52712	998641	RTX-3450100	50219	50819	8547546	3800000	2019-02-19	50919	50219
		51715	52715	978101	RTX-5002300	50214	50814	6547554	4000000	2019-10-09	50914	50214
		51717	52717	279101	RTX-000100	50215	50815	84567546	350000	2018-05-02	50915	50215
		51718	52718	191877	RTX-430100	50203	50803	342355325	520000	2018-02-25	50903	50203
		51720	52720	485631	RTX-940100	50210	50810	534324	2800000	2019-01-23	50910	50210

QUERY 6

Retrieve Customer details whose Claim Amount is less than Coverage Amount and Claim Amount is greater than Sum of (CLAIM_SETTLEMENT_ID, VEHICLE_ID, CLAIM_ID, CUST_ID)

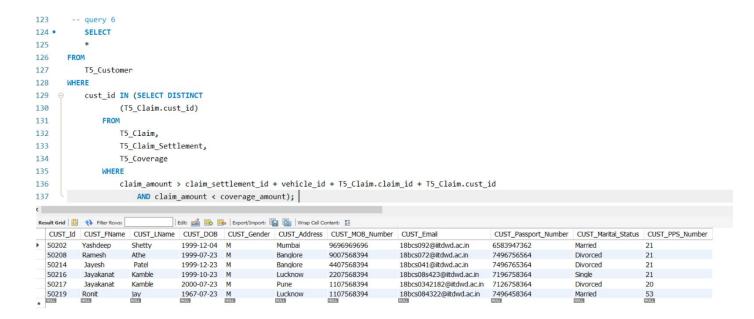
SELECT

*

FROM

T5_Customer

WHERE



CONTRIBUTION:

PHASE -1: Creating tables

PHASE -2: Inserting and testing the data and removing insertion, deletion and updation anomalies.

PHASE -3: Creating and executing queries and modification of data

Table distribution:

- 1, 2 Aakash Tiwari
- 3, 4 Saicharan

- 5, 6 Shubham Shinde
- 7, 13 Vedant Jadhav
- 8, 9 Tej Arvind Sapram
- 10, 14 Bhavya Tripathi
- 11, 12 Yashdeep Shetty
- 15, 22 Vishal Kotwal
- 16, 17 Rutvik Yamkanmardi
- 18, 19 S Namratha
- 20, 21 Pravalika

Groups for query:

- 1- Namratha, Aakash
- 2-Rutvik, Vedant
- 3-Yashdeep
- 4-Bhavya, Pravalika
- 5-Sigiri, Teja
- 6-Vishal, Shinde