DATABASE DESIGN FOR A VEHICLE INSURANCE COMPANY

CS301 , DBMS - V SEMESTER.

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Project title : A database for a Vehicle Insurance Company

Project Queries

Query 1 :

Retrieve customer and vehicle details who has been involved in an incident and claim status is pending.

Query : select distinct T1.T7_Cust_Id,concat(T1.T7_Cust_FName,T1.T7_Cust_LName) as T7_Cust_Name,T1.T7_Cust_MOB_Number,T2.T7_Vehicle_Id,T2.T7_Vehicle_Registration_Number,T2.T7_Vehicle_Manufacturer,T2.T7_Vehicle_Model_Number from T7_CUSTOMER as T1 INNER JOIN T7_VEHICLE as T2 on T2.T7_Cust_id = T1.T7_Cust_Id where T2.T7_Vehicle_Id not in (select T7_Vehicle_Id from T7_CLAIM_SETTLEMENT) and T1.T7_Cust_Id = ANY (select T7_Cust_Id from T7_CLAIM where T7_Incident_Id is not null);

Result :

T7_Cust_Id	T7_Cust_Name	T7_Cust_MOB_Number	T7_Vehicle_Id	T7_Vehicle_Registration_Number	T7_Vehicle_Manufacturer	T7_Vehicle_Model_Number
70101	ArunKumar	9000000001	70401	TN 01 AZ 9009	Skoda	RTX-500100
70102	Varun Kumar	8000010001	70403	MH 11 CX 7227	Tata	CD5433100
70102	Varun Kumar	8000010001	70405	MH 02 EV 5445	Maruti	GH848500
70103	Nidhi Agarwal	9000000002	70406	TS 29 FU 4554	Honda	IJ430100
70104	Sharukh Khan	8307468394	70408	TN 10 HS 2772	Activa	KL503452
70105	ShilpaShetty	9000000003	70410	DL 41 JQ 0990	BMW	MN450100
70111	Virat Kohli	9000000006	70418	TS 14 HI 7777	Skoda	UV430100

Query 2 :

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

Query : select * from T7_CUSTOMER where T7_CUSTOMER.T7_Cust_Id in (select T7_Cust_Id from T7_PREMIUM_PAYMENT where T7_PREMIUM_PAYMENT.T7_Premium_Payment_Amount > (select sum(T7_Cust_Id) from T7_CUSTOMER));

Result :

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Query 3 :

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

Query : select * from T7_INSURANCE_COMPANY where T7_Company_Name in (select T7_Company_Name from T7_OFFICE group by T7_Company_Name having T7_Company_Name in (select T7_OFFICE.T7_Company_Name from T7_PRODUCT inner join T7_OFFICE on T7_OFFICE.T7_Company_Name=T7_PRODUCT.T7_Company_Name group by T7_OFFICE.T7_Company_Name having Count(distinct(T7_Product_Number))>Count(distinct(T7_Department_Name))) and count(distinct T7_Address)>1);

Result :

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.

Query : select * from T7_CUSTOMER where T7_CUSTOMER.T7_Cust_id in (select T7_Cust_Id from T7_VEHICLE where T7_VEHICLE.T7_Policy_Number not in (select T7_Policy_Number from T7_PREMIUM_PAYMENT) and T7_VEHICLE.T7_Cust_Id in (select T7_Cust_Id from T7_VEHICLE GROUP BY T7_VEHICLE.T7_Cust_Id having count(T7_VEHICLE.T7_Cust_Id) > 1) and T7_VEHICLE.T7_Cust_Id in (select T7_Cust_Id from T7_INCIDENT_REPORT where T7_Incident_Type = 'Accident'));

Result :

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Query 5 :

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

Query : select * from T7_VEHICLE where T7_VEHICLE.T7_Vehicle_Number < (select T7_Premium_Payment_Amount from T7_PREMIUM_PAYMENT   where T7_Vehicle.T7_Policy_number=T7_Premium_Payment.T7_Policy_number);

Result :

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 .

Query :

select distinct
T7_Customer.T7_Cust_Id,T7_CUST_FNAME,T7_CUST_LNAME,T7_CUST_GENDER,T7_CUST
_DOB,T7_CUST_MOB_NUMBER from T7_CUSTOMER inner join T7_Claim_Settlement on
T7_CUSTOMER.T7_Cust_Id = T7_Claim_Settlement.T7_Cust_Id where
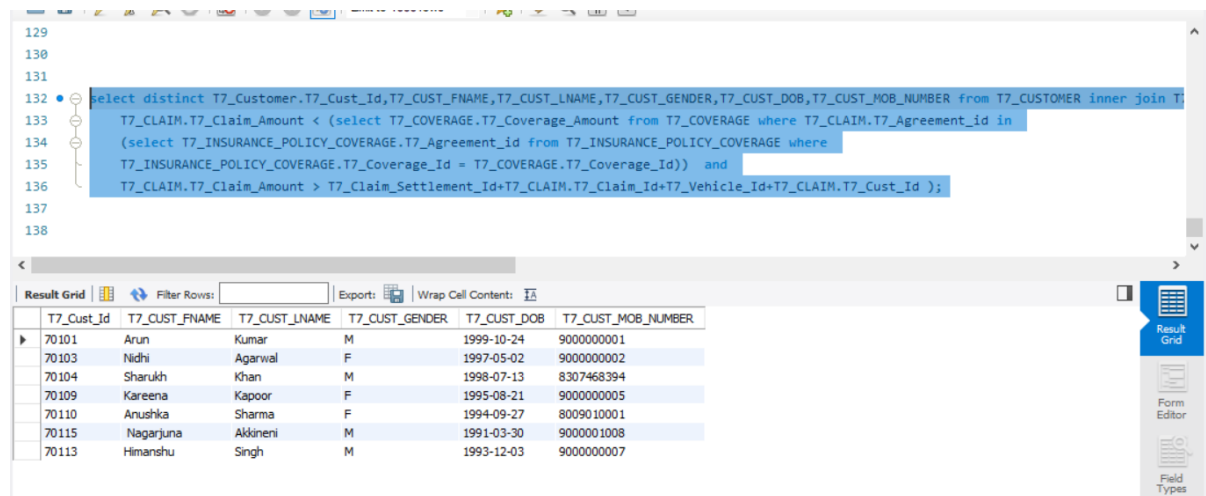T7_CUSTOMER.T7_Cust_Id in (select T7_Cust_Id from T7_CLAIM where

T7_CLAIM.T7_Claim_Amount < (select T7_COVERAGE.T7_Coverage_Amount from
T7_COVERAGE where T7_CLAIM.T7_Agreement_id in

(select T7_INSURANCE_POLICY_COVERAGE.T7_Agreement_id from
T7_INSURANCE_POLICY_COVERAGE where

T7_INSURANCE_POLICY_COVERAGE.T7_Coverage_Id =
T7_COVERAGE.T7_Coverage_Id)) and

T7_CLAIM.T7_Claim_Amount >
T7_Claim_Settlement_Id+T7_CLAIM.T7_Claim_Id+T7_Vehicle_Id+T7_CLAIM.T7_Cust_Id);

Result :

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Extra Queries

1.Case Statements :

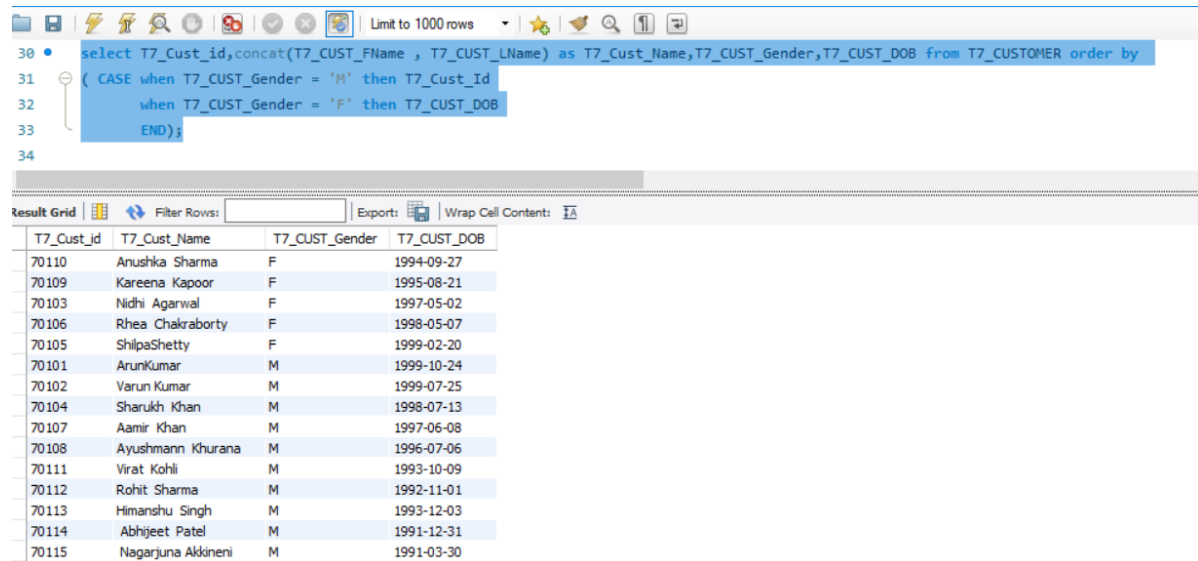Order Male Customers by Customer_Id and Female Customers by Date of Birth.

Query :

select T7_Cust_id,concat(T7_CUST_FName , T7_CUST_LName) as
T7_Cust_Name,T7_CUST_Gender,T7_CUST_DOB from T7_CUSTOMER order by

(CASE when T7_CUST_Gender = 'M' then T7_Cust_Id

when T7_CUST_Gender = 'F' then T7_CUST_DOB

END);

Result :

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2.Stored Procedures :

A stored procedure to select data from customers based on their Marital Status.

Code :
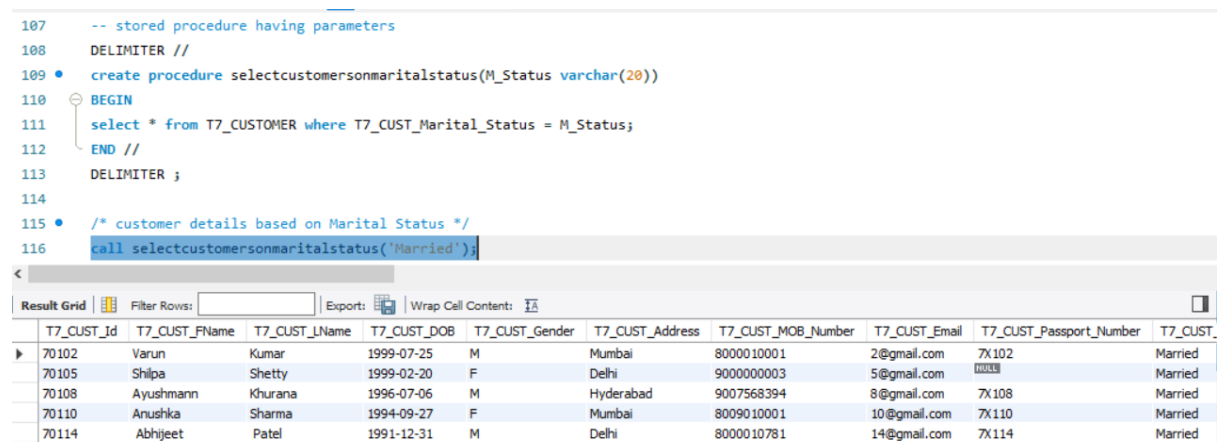
create procedure selectcustomersonmaritalstatus(M_Status varchar(20))

BEGIN

select * from T7_CUSTOMER where T7_CUST_Marital_Status = M_Status;

END //

Result : call selectcustomersonmaritalstatus('Married');

3. Functions :

A function to calculate sum of 4 integers.

Code :

```
create function CalcSum(v1 int,v2 int,v3 int,v4 int)

RETURNS int

BEGIN

        declare calcsum int;

    set calcsum = v1 + v2 + v3 + v4 ;

    RETURN calcsum;

END;
```

Result : CalcSum(4,5,6,7)

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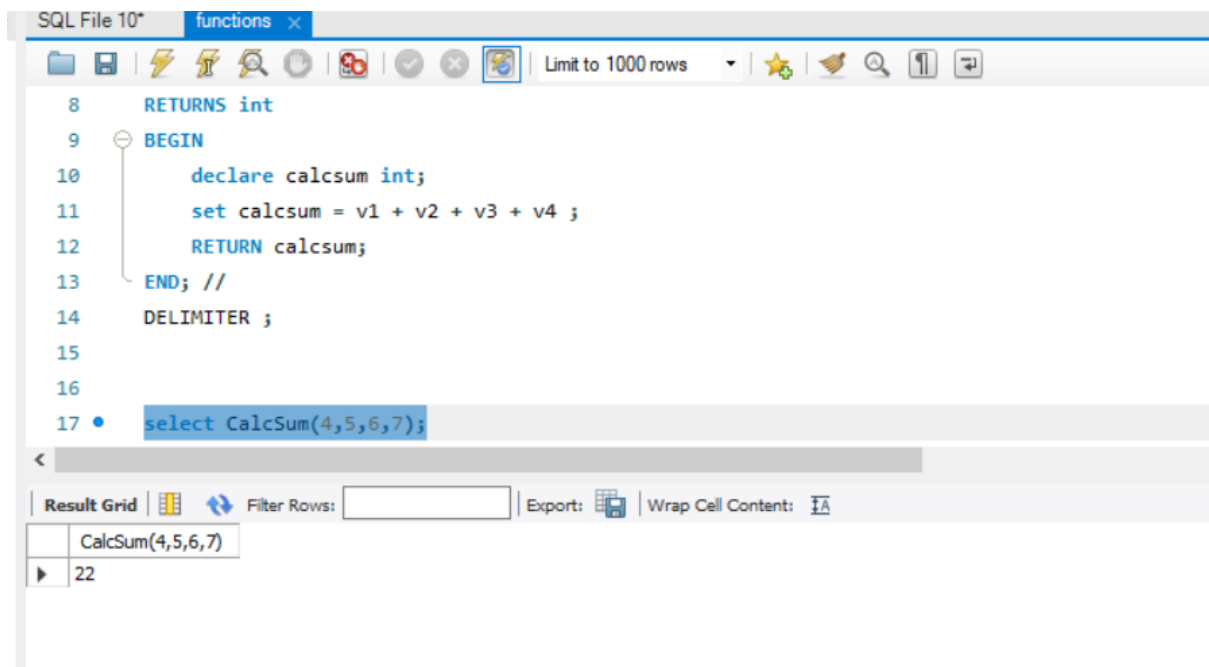
4. Views :

A view that selects all the vehicles from a state using regex.(Ex :Maharashtra)

Code :

```
create view Maharashtra_Vehicles as select
T7_Vehicle_Id,T7_Vehicle_Registration_Number,T7_Vehicle_Type,T7_Vehicle_Manufacturer,T7_
Vehicle_Engine_Number,T7_Cust_Id from T7_VEHICLE where T7_Vehicle_Registration_Number
like 'MH%' ;
```

Result :

```
33      -- _____
34
35      /* a view that selects all the vehicles from Maharshtra using regex*/
36  •   create view Maharashtra_Vehicles as select T7_Vehicle_Id,T7_Vehicle_Registration_Number,T7_Vehicle_Type,
37          T7_Vehicle_Manufacturer,T7_Vehicle_Engine_Number,T7_Cust_Id from T7_VEHICLE where T7_Vehicle_Registration_Number like 'MH%' ;
38
39  •   select * from T7_VEHICLE;
40  •   select * from Maharashtra_Vehicles;
41
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: IA

T7_Vehicle_Id	T7_Vehicle_Registration_Number	T7_Vehicle_Type	T7_Vehicle_Manufacturer	T7_Vehicle_Engine_Number	T7_Cust_Id
70405	MH 02 EV 5445	4 wheeler	Maruti	70428	70102
70421	MH 02 LM 9998	2 wheeler	Maestro	70444	70115
70422	MH 03 LM 9998	4 wheeler	Innova	70445	70113
70416	MH 07 EF 5555	4 wheeler	Ford	70439	70110
70403	MH 11 CX 7227	4 wheeler	Tata	70426	70102
70420	MH 12 LM 9999	4 wheeler	BMW	70443	70115
70412	MH 27 LO 1111	4 wheeler	Audi	70435	70107
70417	MH 34 GH 6666	4 wheeler	Volkswagon	70440	70110
70404	MH 35 DW 6336	4 wheeler	Benz	70427	70102

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