DBMS LAB TEST

Group   :   5

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Write SQL Query for the above database Schema

1)Query:

SELECT E.* FROM Employee E

WHERE E.Eno IN (SELECT D.Eno FROM Dependent D

WHERE D.Eno =E.Eno AND D.Sex =E.Sex);

2) Query:

SELECT P.Pno, P.Pname, COUNT (P.*) FROM Project P, Works_no W

WHERE W. Pno = P. Pno GROUP BY P.Pno, P.Pname

HAVING COUNT (P.*) > 2;

3) Query:

SELECT D.Dno, COUNT (D.*) FROM Department D, Employee E

WHERE D.Dno =E.Dno AND E.Salary > 50000 AND D.Dno IN

> *(SELECT E1.Dno FROM Employee E1 GROUP BY E1.Dno*
>
> *HAVING COUNT (E1.*) > 3) GROUP BY D.Dno;*

4)Query:

> *SELECT E.*,D.* FROM Employee E, Dependent D, Department D1*
> *WHERE E.Eno=D.Eno AND D.Dep_name=D1.Dname GROUP BY*
> *D1.Mgreno HAVING COUNT (D1.Mgreno)>1 AND COUNT(E.Eno)>10*

5)Query:

> *SELECT D.**
>
> *FROM Department D, Project P*
>
> *WHERE D.Dno=P.Dnum group by P.Pno*
>
> *having count(P.Pno) > 1 AND count(P.Plocation) > 1*

2)Normalization

Universal relation contains:

Plot(PropertyId, CountryName,Plot, Area, Price, TaxRate)

Functional Dependencies:

Propertyid -> {CountryName,Plot,Area,TaxRate}

{CountryName,Plot} ->{Propertyid,Area,Price,TaxRate}

CountryName -> TaxRate

Area -> Price

Propertyid* = Propertyid, CountryName, Plot,Area, Price, TaxRate

CountryName* = CountryName,TaxRate

Plot* = Plot

Area* = Price,Area

Price* = Price

TaxRate* = Tax

Key={Propertyid}

Prime Attributes={Propertyid}

Non-Prime attributes={CountryName,Plot,Area,Price,TaxRate}

The table is in already 1NF as there are no multivalue attributes.

The table is also in 2NF as there is no partial dependencies.

But the table is not in 3NF because there transitive dependencies.

To Convert into 3NF we divide Table as follows:

CountryName,Price -> Propertyid,Area,Price,TaxRate

CountryNAme-> TaxRate

Area -> Price

Are the 3 transitive dependencies.

     i)   {Area,Price}

              Area* ->Price,Area

                Key = Area

   So it is in **3NF**

     ii)   {CountryName,TaxRate}

             CountryName* -> TaxRate

             Key =CountryName

   So , now it is in 3NF

iii)   {CountryName,Plot,Propertyid,Area}

Propertyid* ->Plot,CountryName,Area

Plot*,CountryName*->Area,Propertyid

Keys={Propertyid}{Plot,CountryName}

So, it is in **3NF.**