Experiment No. : 2 Date : 18/10/22

Consider the relations : PART, SUPPLIER and SUPPLY. The Supplier relation holds information about suppliers. The attributes SID, SNAME, SADDR describes the supplier. The part relation holds the attributes such as PID, PNAME and PCOLOR. The shipment relation holds information about shipments that include SID and PID attributes identifying the supplier of the shipment and the part shipped respectively. The Shipment relation should contain information on the number of parts shipped.

a) Mention Constraints neatly.
b) Design the ER Diagram for the problem statement.
c) State the schema diagram for ER Diagram.
d) Create the above table, Enter suitable tuples and perform following operation in oracle SQL :
1) obtain the details of part supplied by Supplier #Sname
2) Obtain the Names of Suppliers who Supply #Pname.
3) Delete the parts which are in #Pcolour.
4) List the supplier who Supplies exactly two parts.

```
Create Table Part (
    PID number(3),
    Pname varchar(10),
    Pcolour varchar(10),
    Primary key (PID));

CREATE TABLE Supplier(
    SID number(3),
    Sname varchar(10),
    Saddr varchar(10),
    primary key (SID));
```

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```
CREATE TABLE SUPPLY (
    PID number(3),
    SID number(3),
    quantity number(3),
    Primary key (PID, SID),
    Foreign key (PID) references part (PID) on delete cascade,
    Foreign key (SID) references supplier (SID) on delete cascade);

INSERT ALL
INTO Part values (101, 'Bolts', 'Red');
INTO Part values (102, 'Nuts', 'Red')
INTO Part values (103, 'Plugs', 'Red')
INTO Part values (104, 'Bots', 'Blue')
INTO Part values (105, 'Nuts', 'Blue')
INTO Part values (106, 'Plugs', 'Blue')
INTO Part values (107, 'Bolts', 'Green')
INTO Part values (108, 'Nuts', 'Green')
INTO Part values (109, 'Plugs', 'Green')
Select * from dual;

INSERT All
INTO Supplier value (1, 'Ram', 'BLR')
INTO supplier value (2, 'Shyam', 'DEL')
INTO Supplier value (3, 'Harish', 'BOM')
INTO supplier value (4, 'Mohan', 'CAL')
Select * from dual;
```

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```
INSERT ALL
INTO Supply values (107, 4, 10)
INTO Supply values (109, 4, 15)
INTO Supply values (102, 1, 3)
INTO Supply values (109, 3, 6)
INTO Supply values (104, 3, 3)
INTO Supply values (103, 2, 5)
INTO Supply values (109, 1, 10)
INTO Supply values (106, 2, 10)
INTO Supply values (107, 2, 5)
INTO Supply values (108, 3, 10)
INTO Supply values (106, 3, 5)
INTO Supply values (109, 2, 3)
INTO Supply values (105, 1, 5)
Select * from dual;
```

d] 1⇒

```
Select *
from part
Where PID IN (Select PID
              from Supply
              Where SID IN (Select SID
                            from Supplier
                            where Sname = 'Ram'));
```

2] ⇒

```
Select Sname
from Supplier
Where SID IN (Select SID
              from Supply
              where PID IN (Select PID
                            from Part
                            where Pname = 'Nuts'));
```

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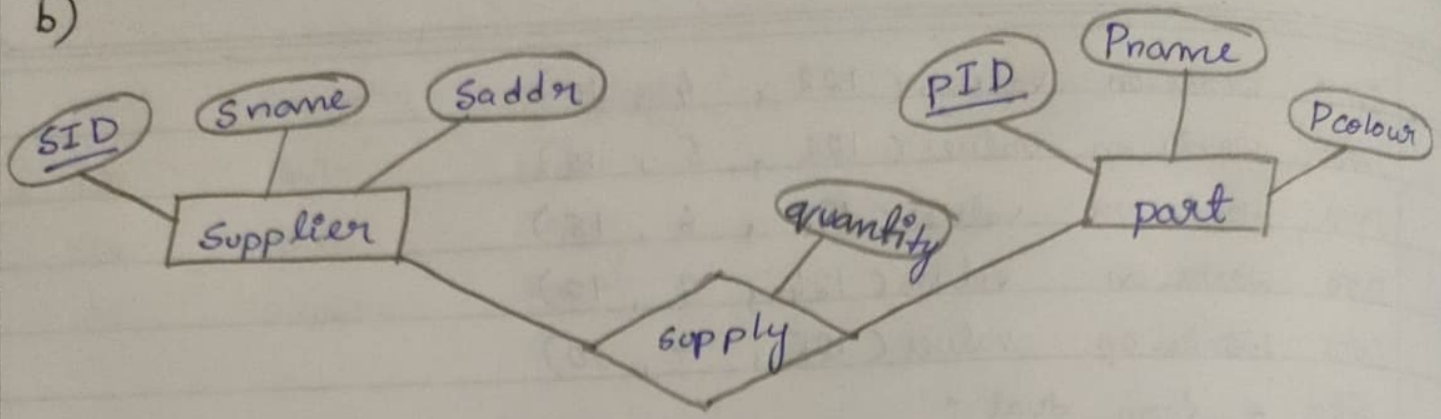
3] ⇒ delete from Part
Where PColour = 'Green' ;

Select * from part ;

4] ⇒ Select SID, Count(SID)
from Supply
Group by SID
having Count(SID) = 2 ;

b)



c) Schema diagram

Part

PID	Pname	Pcolour

Supplier

SID	Sname	Saddr

Supply

PID	SID	quantity

output

Select * from Part;

PID	Pname	Pcolour
101	Bolts	Red
102	Nuts	Red
103	Plugs	Red
104	Bolts	Blue
105	Nuts	Blue
106	Plugs	Blue
107	Bolts	Green
108	Nuts	Green
109	plugs	Green

Select * from Supplier;

SID	Sname	Saddr
1	Ram	BLR
2	Shyam	DEL
3	Harish	BOM
4	Mohan	CAL

select * from Supply;

PID	SID	quantity
107	4	10
109	4	15
102	1	3
109	3	6
104	3	3
103	2	5
109	1	10
106	2	10

107	2	5
108	3	10
106	3	5
109	2	3
105	1	5

1] =>

PID	Pname	Pcolour
102	Nuts	Red
109	Plugs	Green
105	Nuts	Blue.

2] =>

Sname
Ram
Harish

102, 105, 108
1 , 1 3

3] =>

PID	Pname	Pcolour
101	Bolts	Red
102	Nuts	Red
103	Plugs	Red
104	Bolts	Blue
105	Nuts	Blue
106	plugs	Blue

4] =>

SID	Count (SID)
4	2.