

Prince

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2cs10

assignment 7

असाइनमेंट 7

```
In [ ]: #tables are created here
# सार्वजनिक नहीं बनाई गई हैं
CREATE TABLE Salespeople
(
    snum integer PRIMARY KEY,
    sname CHAR(40) UNIQUE,
    city CHAR(20),
    comm NUMBER(5,2)
);
CREATE TABLE Customers
(
    cnum integer PRIMARY KEY,
    cname CHAR(40),
    city CHAR(20) not null,
    snum integer REFERENCES Salespeople
);
CREATE TABLE orders
(
    onum integer PRIMARY KEY,
    amt DECIMAL,
    odate DATE NOT NULL,
    cnum integer,
    snum integer,
    FOREIGN KEY (snum) REFERENCES Salespeople,
    FOREIGN KEY (cnum) REFERENCES Customers
);
INSERT INTO Salespeople VALUES (1000,'Peel','London',.15);
INSERT INTO Salespeople VALUES (1001,'Serres','Sanjose',.12);
INSERT INTO Salespeople VALUES (1002,'Motika','London',.11);
INSERT INTO Salespeople VALUES (1003,'Rifkin','Barcelona',.13);
INSERT INTO Salespeople VALUES (1004,'Axelrod','Newyork',.14);
INSERT INTO Salespeople VALUES (1005,'Rafale','Barcelona',.13);
INSERT INTO Salespeople VALUES (1006,'Axe','Newyork',.12);
INSERT INTO Salespeople VALUES (1007,'chapsi','Newyork',.13);
INSERT INTO Customers VALUES (2000,'Hoffman','London',1000);
INSERT INTO Customers VALUES (2001,'Giovanni','Rome',1001);
INSERT INTO Customers VALUES (2002,'Liu','Sanjose',1002);
INSERT INTO Customers VALUES (2003,'Grass','Berlin',1003);

INSERT INTO Customers VALUES (2004,'Clements','London',1004);
INSERT INTO Customers VALUES (2005,'Cisneros','Sanjose',1005);
INSERT INTO Customers VALUES (2006,'Pereira','Rome',1006);
select * from Customers
INSERT INTO orders VALUES (3000,15.00,'3-10-1990',2000,1000);
INSERT INTO orders VALUES (3001,12.10,'3-10-1990',2001,1001);
INSERT INTO orders VALUES (3002,13.10,'3-10-1990',2002,1002);
INSERT INTO orders VALUES (3003,13.10,'4-oct-1990',2003,1003);
INSERT INTO orders VALUES (3004,12.10,'5-oct-1990',2004,1004);
INSERT INTO orders VALUES (3005,1300.10,'6-oct-1990',2005,1005);
INSERT INTO orders VALUES (3006,1001.10,'6-oct-1990',2006,1006);

INSERT INTO orders VALUES (3007,1100.40,'3-oct-1990',2007,1007);
select * from salespeople;
select * from orders;
select * from customers;
```

```
In [ ]: --q1
--> Count the number of Salesperson whose name begin with 'A'/'A'.
select count(*) from salespeople where sname like 'A%' or sname like 'a%';
```

output उत्पादन

```
In [ ]: COUNT(*)
4
```

```
In [ ]: --> Display all the Salesperson whose all orders worth is more than Rs. 10000
--q2 next both queries are correct अगर दोनों सही उत्तर सही हैं
select sname from salespeople where snum in (select snum from orders group by snum having sum(amt)>10000);
select distinct s.sname from salespeople s join orders o on (s.snum=o.snum) group by sname having sum(o.amt)> 10000;
```

output उत्पादन

```
In [ ]: SNAME
Serres
Peel
```

```
In [ ]: --q3
--> Count the number of Salesperson belonging to Newyork.
select count(*) from salespeople where city='Newyork';
```

output उत्पादन

```
In [ ]: COUNT(*)
1
```

```
In [ ]: --> Display the number of Salespeople belonging to Landon and belonging to Paris.
--q4
select count(*) from salespeople where city in ('Landon','Paris');
```

output उत्पादन

```
In [ ]: COUNT(*)
1
```

```
In [ ]: --> Display the number of orders taken by each Salesperson and their date of orders.
--q5
select sum(select s.sname o.snum count(o.onum) o.odate from orders o full outer join salespeople s on (s.snum=o.snum) group by distinct s.sname o.snum o.odate) from salespeople group by sname; --missing expression नमीशुल अभिव्यक्ति
```

output उत्पादन

```
In [ ]: 
```

```
In [ ]: --> Write a query that counts the number of Salespeople registering orders each day.
--q6
select odate,count(distinct snum) from orders group by odate;
```

output उत्पादन

```
In [ ]: ODATE COUNT(DISTINCTSNUM)
05-OCT-90 2
06-OCT-90 2
07-OCT-90 1
08-OCT-90 1

In [ ]: --> Write a query that selects the first customer in alphabetical order whose name begins with 'G'.
--q7
select * from customers where cname like 'G%' order by cname FETCH FIRST 1 ROWS ONLY;
```

output उत्पादन

```
In [ ]: CNUM CNAME CITY SNUM
2001 Giovanni Rome 1001
```

```
In [ ]: --> Find out the largest orders by Snum 1000 & 1001
--q8
select max(amt) from orders group by snum having snum in (1000,1001);
```

output उत्पादन

```
In [ ]: MAX AMT
1300.10
1001.10
```

```
In [ ]: --> Find out the maximum single order amount of a Salesperson over Rs. 10000 in a day.
--q9 -- both are correct in different sense of question दोनों अलग-अलग अर्थ में सही हैं
SELECT snum, max(amt) FROM orders
GROUP BY snum having max(amt)>10000;

select max(amt) from orders;
```

output उत्पादन

```
In [ ]: SNUM MAX AMT
1000 1300.10
1001 1001.10
```

```
In [ ]: MAX AMT
1300.10
```

```
In [ ]: --> Find out the no. of Salesperson who belongs to same city and have same commission percentage.
--q10 both queries are correct because group by (city, comm) is same as group by city, comm

select count(city),city,comm from salespeople group by (city, comm) having count(city) > 1;

select city,comm,count(city),count(comm) from salespeople group by city,comm having count(city)> 1 and count(comm) > 1;
```

output उत्पादन

```
In [ ]: COUNT(CITY) CITY COMM
1 N ewyork .12
1 Ba rcelona .13
```

Assignment 8

```
In [ ]: -----q1 --Find those salesperson name who live in any one of the city of customers
--do it both with sub-query and join
-- join

select distinct sname from salespeople inner join customers on salespeople.city=customers.city;

--or
select distinct s1.snum s1.sname from salespeople s1 customers c1 where s1.city=c1.city;

-- subquery सक्सेरी
select sname from salespeople where city in (select city from customers);
```

output उत्पादन

```
In [ ]: SNUM SNAME
1001 Serres
1001 Peel
```

```
In [ ]: -----q2
--Find those salesperson name customers name who belong to any one of the
--city of customers
-- do it both with sub-query and join

-- subquery मैंने एक कॉलम में आउटपुट एक्जट करने के लिए यूनिन का उपयोग और बुकिंग को फिल्टर करने के लिए किया
select distinct c1.cname as name from salespeople s1 customers c1 where c1.city = any(select city from salespeople) union all
select distinct s1.sname from salespeople s1, customers c1 where s1.city = any(select city from customers);

--join मैंने एक कॉलम में आउटपुट एक्जट करने के लिए यूनिन का उपयोग किया
select s1.sname as name from salespeople s1 customers c1 where s1.city=c1.city union
select c1.cname as name from salespeople s1 customers c1 where s1.city=c1.city
```

output उत्पादन

```
In [ ]: # subquery
NAME
Liu
Clements
Hoffman
Cisneros
Serres
Peel

In [ ]: # joins
NAME
Cisneros
Hoffman
Liu
Peel
Serres
Clements

In [ ]: -----q3
--Find those salesperson name who belong to the city of their customer --in this do we have to refer orders or not i have done both
-- do it both with sub-query and join

--join
select distinct s1.snum s1.sname from salespeople s1 customers c1 where s1.snum=c1.snum and s1.city=c1.city;
-- if we have customers and salespeople as related in orders // ग्राहक और और salespeople संबंधित हैं

SELECT distinct orders.snum
FROM orders
JOIN salespeople
ON orders.snum = salespeople.snum
JOIN customers
ON orders.cnum=customers.cnum where salespeople.city=customers.city;

--subquery // सक्सेरी
select * from salespeople s1 where exists (select c1.snum from customers c1 where c1.city=s1.city); --this is correlated but how to do
with subquery simply // यह सरल है लेकिन सरलता से कैसे किया जाए

-- if we have customers and salespeople as related in orders then -- correct or not but it is giving right output यह सही आउटपुट दे रहा है
select distinct s1.snum from salespeople s1 where s1.city in (select c1.city from customers c1 where c1.cnum in (select o1.cnum from orders o1 where o1.snum=s1.snum));
```

output उत्पादन

```
In [ ]: # joins
SNUM SNAME
1001 Serres
1001 Peel
```

```
In [ ]: #join again
SNUM
1001
1001
```

```
In [ ]: #nonrelated subquery
SNUM SNAME CITY COMM
1001 Peel London .12
1001 Serres Sanjose .13
```

```
In [ ]: # coorelated subquery
SNUM
1001
1001
```

```
In [ ]: -----q4
--Find those salesperson name who belong to the city of their customer
--do it with co-related sub-query)
-- same as above ऊपर की तरह

select distinct s1.snum s1.sname from salespeople s1 customers c1 where s1.city=c1.city;
select s1.sname from customers c1 inner join salespeople s1 on s1.snum=c1.snum group by c1.snum having count(c1.snum)> 1;
```

output उत्पादन

```
In [ ]: SNAME CNAME
Peel Hoffman
Peel Clements
Serres Liu
Serres Grass
Motika Pereira
Rifkin Cisneros
Axelrod Giovanni
chapsi Clements
```

```
In [ ]: -----q6
--Find those customer name who is not assigned to any salesperson

INSERT INTO Customers VALUES (2008,'Clements','London',null);
select cname from customers where snum is null;
```

output उत्पादन

```
In [ ]: Clements
```

```
In [ ]: -----q7
--Find the highest order of each salesperson
select max(amt),snum from orders group by snum ;
```

output उत्पादन

```
In [ ]: MAX AMT SNUM
1300 1000
1001 1001
1001 1001
1110 1003
```

```
In [ ]: -----q8
--Find the names of salesperson and their highest order
select max(o1.amt),select s2.sname from salespeople s2 where s2.snum=o1.snum ) from orders o1 join salespeople s1 on o1.snum=s1.snum
group by o1.snum ; --this is correct
select s1.sname ,select max(o1.amt) from orders o1 group by o1.snum having o1.snum=s1.snum) from salespeople s1; -- this is also correct //सही सही है
```

output उत्पादन

```
In [ ]: SNAME MAX AMT
Serres 1300.10
Motika -
Rifkin 1110
Axelrod -
Axe -
chapsi -
```

```
In [ ]: -----q9
--Find those orders of salesperson which is more than his average orders
select amt from orders where exists (select amt from orders group by snum having amt>avg(amt)); --i cannot use this because amt > avg amt not a group by expression

select s1.snum ,amt from orders o1 where o1.amt> (select avg(o2.amt) from orders o2 group by o2.snum having o2.snum=o1.snum); --this is correct यह सही है
```

output उत्पादन

```
In [ ]: AMT
1300.10
1001.10
1110
```

```
In [ ]: -----q10
--List those salesperson who has more than two customers.
-- use all 4 methods

-- join
-- joins + coorelated subqueries
select count(c1.snum) ,(select s2.sname from salespeople s1 where s1.snum = c1.snum ) from customers c1 inner join salespeople s1 on s1.snum=c1.snum group by c1.snum having count(c1.snum) > 1; --correct

-- purely joins but not working --जब्त कर लिया है लेकिन काम नहीं कर रहा है यह सही हमारे साथ प्रोवा कर रही है
select s1.sname ,count(s1.sname) from customers c1 inner join salespeople s1 on s1.snum=c1.snum group by c1.snum having count(c1.snum)> 1; --यह काम नहीं कर रही है in this dont use s1.sname , use s1.snum

-- select s1.snum from customers c1 inner join salespeople s1 on s1.snum=c1.snum group by c1.snum having count(c1.snum) > 1;

-- purely joins यह सही जुड़ता है
select s1.sname ,count(s1.sname) from salespeople s1 inner join customers c1 on s1.snum=c1.snum group by s1.sname having count(s1.sname)>1; --correct

-- subquery सक्सेरी
select * from salespeople where snum in (select snum from customers group by snum having count(snum)> 1);

--coorelated subquery सहसंबद्ध सक्सेरी
select count(c1.snum) ,(select s1.sname from salespeople s1 where s1.snum = c1.snum ) from customers c1 group by (snum) having count(c1.snum)> 1;
```

output उत्पादन

```
In [ ]: SNUM
1001
```

2 Peel
2 Serres