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ROLL NO : 20BT8019

REGISTRATION NO : 20U10484

SUBJECT : DATABASE MANAGEMENT SYSTEM

SUBJECT CODE : CSC631

### Assignment

Create the following tables:-

**Table: deposit**

Attributes	Data Type	Size	Condition
Act_no	Varchar2	10	Primary key
C_name	Varchar2	10	Foreign key
B_name	Varchar2	10	Foreign key
amount	number	8,2	Not null

**Table: Branch**

Attributes	Data Type	Size	Condition
B_name	Varchar2	10	Primary key
City	Varchar2	10	City in Delhi, kolkata,Mumbai

**Table: Customer**

Attributes	Data Type	Size	Condition
C_name	Varchar2	10	Primary key (in capital latter)
City	Varchar2	10	Not Null

**Table: Borrow**

Attributes	Data Type	Size	Condition
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<b>Loan_No</b>	<b>Varchar2</b>	<b>10</b>	<b>Primary key</b> <b>(in capital latter)</b>
<b>C_Name</b>	<b>Varchar2</b>	<b>10</b>	<b>Foreign key</b>
<b>B_Name</b>	<b>Varchar2</b>	<b>10</b>	<b>Foreign key</b>
<b>amount</b>	<b>number</b>	<b>8,2</b>	<b>greater than 1000</b>

1. Give the name of the customers having living city Nagpur and branch city Kolkata.

```
SELECT DISTINCT c.C_name
FROM deposit d
JOIN Customer c ON d.C_name =
c.C_name JOIN Branch b ON d.B_name =
b.B_name
WHERE c.City = 'Nagpur' AND b.City = 'Kolkata';
```

2. Give the name of the customers having the same living city as their branch city Kolkata.

```
SELECT DISTINCT c.C_name
FROM deposit d
JOIN Customer c ON d.C_name =
c.C_name JOIN Branch b ON d.B_name =
b.B_name
WHERE c.City = 'Kolkata' AND b.City = 'Kolkata';
```

3. Give the name of the customers who are deposits and have same branch city as that of Sunil.

```
SELECT DISTINCT c.C_name
FROM deposit d
JOIN Customer c ON d.C_name =
c.C_name JOIN Branch b ON d.B_name =
b.B_name WHERE b.City = (
```

```

SELECT b.City
FROM deposit d

JOIN Customer c ON d.C_name =
c.C_name JOIN Branch b ON d.B_name =
b.B_name WHERE c.C_name = 'Sunil'
)
AND d.C_name != 'Sunil';

```

4. Give the deposit details and loan details of customers in the city where Ram is living.

```

SELECT d.Act_no, d.amount, b.Loan_No,
b.amount FROM deposit d

FULL OUTER JOIN Borrow b ON d.C_name = b.C_name AND d.B_name =
b.B_name JOIN Customer c ON d.C_name = c.C_name OR b.C_name = c.C_name
JOIN Branch br ON d.B_name = br.B_name OR b.B_name =
br.B_name WHERE c.City = (

SELECT c.City
FROM Customer
c

WHERE c.C_name = 'Ram'
);

```

5. List the no. of customers who are depositors as well as borrowers.

```

SELECT COUNT(DISTINCT d.C_name)
FROM deposit d
JOIN Borrow b ON d.C_name = b.C_name AND d.B_name = b.B_name;

```

6. Give the name of borrowers loan amount greater than loan amount of Amar

```

SELECT DISTINCT b.C_name
FROM Borrow b
JOIN Borrow b2 ON b.B_name =
b2.B_name WHERE b.amount > (

```

```

SELECT
b3.amount FROM
Borrow b3

WHERE b3.C_name = 'Amar'

);

```

7. Give the name of depositors having the same branch city as that of Sunil and having the same city as that of Anil

```

SELECT DISTINCT d.C_name
FROM deposit d

JOIN Customer c1 ON d.C_name =
c1.C_name JOIN Branch b1 ON d.B_name =
b1.B_name JOIN deposit d2 ON d.C_name =
d2.C_name JOIN Customer c2 ON
d2.C_name = c2.C_name JOIN Branch b2 ON
d2.B_name = b2.B_name WHERE b1.City = (

SELECT b.City
FROM Branch b

JOIN Customer c ON b.City =
c.City WHERE c.C_name = 'Sunil'

)

AND c2.City = (
SELECT c.City
FROM Customer
c

WHERE c.C_name = 'Anil'

);

```

8. List all the depositors living in city kol & having branch in city Delhi .

```

SELECT d.Act_no, d.C_name, d.B_name,
d.amount FROM deposit d

JOIN Customer c ON d.C_name =
c.C_name JOIN Branch b ON d.B_name =
b.B_name WHERE c.City = (

```

```

SELECT City
FROM
Customer

WHERE C_name = 'Kolkata'

)

AND b.City = (
SELECT City
FROM
Branch

WHERE B_name = 'Delhi'

);

```

9. List all the Customers who are both depositors & borrowers & living in the same city as Anil .

```

SELECT DISTINCT c.C_name
FROM deposit d

JOIN Customer c ON d.C_name = c.C_name
JOIN Borrow b ON d.C_name = b.C_Name
JOIN deposit d2 ON c.C_name = d2.C_name
JOIN Customer c2 ON d2.C_name =
c2.C_name WHERE c2.City = (

SELECT c.City
FROM Customer c

WHERE c.C_name = 'Anil'

);

```

10. List the customers who are borrowers or depositors & having living city kol & branch city same as that of Sunil .

```

SELECT DISTINCT c.C_name
FROM Customer c

LEFT JOIN deposit d ON c.C_name = d.C_name
LEFT JOIN Branch b ON d.B_name = b.B_name
LEFT JOIN Borrow bo ON c.C_name =
bo.C_Name WHERE c.City = (

```

```

SELECT City
FROM
Customer

WHERE C_name = 'Sunil'
)

AND b.City = (
SELECT City
FROM
Customer

WHERE C_name = 'Sunil'
)

AND c.City = 'Kolkata';

```

11. List all cities where branches of Anil and Sunil are located

```

SELECT City FROM
Branch
WHERE B_name IN (
SELECT B_name
FROM deposit
WHERE C_name = 'Anil'
)
UNION
SELECT City FROM
Branch
WHERE B_name IN (
SELECT B_name
FROM deposit
WHERE C_name = 'Sunil'
);

```

12. List the name of the branch having highest no of depositors.

```

SELECT B_name
FROM (
SELECT B_name, COUNT(*) AS num_depositors
FROM deposit
GROUP BY B_name
) d
JOIN Branch b ON d.B_name = b.B_name
ORDER BY num_depositors DESC FETCH
FIRST 1 ROW ONLY

```

13. List the name of customers having maximum deposit  
SELECT c.C\_name  
FROM Customer c  
JOIN deposit d ON c.C\_name = d.C\_name  
WHERE d.amount = (  
    SELECT MAX(amount)  
    FROM deposit  
);

14. List all the customers, along with their amount, who are either borrowers or depositors and living city is Delhi  
SELECT d.C\_name, d.amount  
FROM deposit d  
JOIN Customer c ON d.C\_name = c.C\_name  
WHERE c.City = 'Delhi'  
UNION  
SELECT b.C\_Name, b.amount  
FROM Borrow b  
JOIN Customer c ON b.C\_Name = c.C\_name  
WHERE c.City = 'Delhi';

15. List all the depositors having deposit in all the branches where Sunil is having account.  
SELECT d.C\_name  
FROM deposit d  
JOIN Branch b ON d.B\_name = b.B\_name  
JOIN Customer c ON d.C\_name = c.C\_name  
WHERE b.City = (SELECT City FROM Branch WHERE B\_name = 'Sunil')  
GROUP BY d.C\_name  
HAVING COUNT(DISTINCT d.B\_name) =  
(SELECT COUNT(DISTINCT B\_name) FROM deposit WHERE C\_name = 'Sunil');

16. List total deposit of the customers living in the city where Sunil is living.  
SELECT c.C\_name, SUM(d.amount) as total\_deposit  
FROM deposit d  
JOIN Customer c ON d.C\_name = c.C\_name  
WHERE c.City = (SELECT City FROM Branch WHERE B\_name = 'Sunil')  
GROUP BY c.C\_name;

17. List the name customers in 'ABC' branch having more deposit than any other customer in same branch.

```
SELECT c.C_name
FROM deposit d
JOIN Customer c ON d.C_name = c.C_name
WHERE d.B_name = 'ABC'
AND d.amount = (
    SELECT MAX(d2.amount)
    FROM deposit d2
    WHERE d2.B_name = 'ABC'
);
```

18. List the name customers having highest deposit in the city where branch of Sunil is located.

```
SELECT c.C_name
FROM deposit d
JOIN Customer c ON d.C_name = c.C_name
JOIN Branch b ON d.B_name = b.B_name
WHERE b.City = (
    SELECT b2.City
    FROM Branch b2
    JOIN deposit d2 ON b2.B_name =
    d2.B_name WHERE d2.C_name = 'Sunil'
)
AND d.amount = (
    SELECT MAX(d3.amount)
    FROM deposit d3
    JOIN Branch b3 ON d3.B_name = b3.B_name
    WHERE b3.City = (
        SELECT b4.City
        FROM Branch b4
        JOIN deposit d4 ON b4.B_name =
        d4.B_name WHERE d4.C_name = 'Sunil'
    )
);
```

19. List the name depositors having maximum depositors among deposits of Delhi for the branch 'ABC'.

```
SELECT d.d_name
FROM deposit d
INNER JOIN branch b ON d.b_code = b.b_code
WHERE b.b_city = 'Delhi' AND b.b_name = 'ABC' AND d.amount = (SELECT
MAX(amount) FROM deposit WHERE b_code = b.b_code);
```



20. Give the name of the branches having the no. of depositors more than the no. of borrowers.

```
SELECT B.B_name
FROM Branch B
LEFT JOIN deposit D ON B.B_name = D.B_name
LEFT JOIN Borrow BR ON B.B_name = BR.B_name
GROUP BY B.B_name
HAVING COUNT(D.Act_no) > COUNT(BR.Loan_No);
```

21. Give the names of the borrowers having the same branch city and highest borrower.

```
SELECT b.b_name, b.city, l.amount
FROM borrower b
INNER JOIN loan l ON b.cust_id = l.cust_id
WHERE b.city = (SELECT city FROM borrower WHERE b_name = (SELECT
b_name FROM borrower GROUP BY city, b_name HAVING MAX(amount)))
ORDER BY l.amount DESC
LIMIT 1;
```

22. Give 10% interest to all depositors living in Kolkata and branch city in Delhi.

```
UPDATE deposit
SET amount = amount * 1.1
WHERE B_name IN (
SELECT B_name
FROM Branch WHERE
City = 'Delhi'
) AND C_name IN (
SELECT C_name FROM
Customer WHERE City =
'Kolkata'
);
```

23. Assign to the deposit of Anil the maximum deposit from 'ABC' branch.

```
UPDATE deposit
SET amount = (
SELECT MAX(amount)
FROM deposit
WHERE B_name = 'ABC'
)
WHERE C_name = 'Anil' AND B_name = 'ABC';
```

24. Transfer Rs. 1000 from the account of Anil to the account of Sunil if both are having same branch.

```
UPDATE deposit SET amount = amount - 1000 WHERE Act_no = (SELECT Act_no
FROM deposit WHERE C_name = 'Anil' AND B_name = (SELECT B_name FROM
deposit WHERE C_name = 'Sunil' LIMIT 1)) AND amount >= 1000;
UPDATE deposit SET amount = amount + 1000 WHERE Act_no = (SELECT Act_no
FROM deposit WHERE C_name = 'Sunil' AND B_name = (SELECT B_name FROM
deposit WHERE C_name = 'Anil' AND B_name = (SELECT B_name FROM deposit
WHERE C_name = 'Sunil' LIMIT 1)) LIMIT 1);
```

25. Add Rs.1000 to the account of those depositors who are having highest deposit amount in their respective branches.

```
UPDATE deposit d
SET amount = amount + 1000
WHERE amount = (SELECT MAX(amount) FROM deposit WHERE B_name =
d.B_name);
```

26. Add Rs.1000 to the amount of all depositors having deposit equal to or higher than the average deposit of their branches

```
UPDATE customers
SET amount = amount + 1000
WHERE type = 'Deposit' AND amount >= (
    SELECT AVG(amount)
    FROM customers AS c2
    WHERE c2.branch = customers.branch AND c2.type = 'Deposit'
);
```

27. Delete borrower of branches having average loan less than 1000.

```
DELETE FROM borrowers
WHERE branch_city IN
(SELECT branch_city FROM customers
GROUP BY branch_city
HAVING AVG(loan_amount) < 1000);
```

28. Delete the borrower of branches having minimum number of customers.

```
WITH min_customers_branch AS (
    SELECT b.branch_name, COUNT(*) AS num_customers
    FROM customers c
    JOIN branches b ON c.branch_code =
    b.branch_code WHERE c.type = 'borrower'
    GROUP BY b.branch_name
    HAVING COUNT(*) = (
        SELECT MIN(num_customers)
        FROM (
```

```

        SELECT COUNT(*) AS num_customers
        FROM customers
        WHERE type = 'borrower'
        GROUP BY branch_code
    ) AS subquery
)
)
DELETE FROM customers
WHERE type = 'borrower' AND branch_code IN (
    SELECT branch_code
    FROM branches
    WHERE branch_name IN (
        SELECT branch_name FROM
        min_customers_branch
    )
);

```

29. Delete the deposit of Sunil and Anil if both are having same living city. DELETE FROM deposit

```

WHERE c_id IN (
    SELECT d1.c_id
    FROM deposit d1
    INNER JOIN customer c1 ON d1.c_id = c1.c_id
    WHERE c1.living_city = 'city_name' AND c1.c_id IN (
        SELECT d2.c_id
        FROM deposit d2
        INNER JOIN customer c2 ON d2.c_id = c2.c_id WHERE
        c2.branch_city = 'city_name' AND c2.c_id IN (
            SELECT b1.c_id FROM
            borrower b1
            INNER JOIN customer c3 ON b1.c_id = c3.c_id WHERE
            c3.living_city = 'city_name' AND c3.c_id IN (
                SELECT b2.c_id
                FROM borrower b2
                INNER JOIN customer c4 ON b2.c_id = c4.c_id
                WHERE c4.branch_city = 'city_name' AND c4.c_name IN ('Sunil', 'Anil')
            )
        )
    )
);

```