

SAMMON BABU

R MCA S2

ROLL NO – 16

EXPERIMENT NO.5: 10/05/2021

AGGREGATE FUNCTIONS

1.List total loan:

SELECT SUM(AMOUNT) FROM BORROW;

```
mysql> SELECT SUM(AMOUNT) FROM BORROW;
+-----+
| SUM(AMOUNT) |
+-----+
|      22000.00 |
+-----+
1 row in set (0.05 sec)

mysql>
```

2.List total deposit:

SELECT SUM(AMOUNT) FROM DEPOSIT;

```
mysql> SELECT SUM(AMOUNT) FROM DEPOSIT;
+-----+
| SUM(AMOUNT) |
+-----+
|      24200.00 |
+-----+
1 row in set (0.02 sec)

mysql>
```

3.List total loan taken from KAROLBAGH branch:

SELECT MAX(AMOUNT) FROM BORROW WHERE BNAME = 'KAROLBAGH';

```
mysql> SELECT MAX(AMOUNT) FROM BORROW WHERE BNAME = 'KAROLBAGH';
+-----+
| MAX(AMOUNT) |
+-----+
|          NULL |
+-----+
1 row in set (0.01 sec)
```

4.List total deposit of customers having account date later than 1-Jan-96:

SELECT SUM(AMOUNT) from deposit where adate>'1995-03-01';

```
mysql> SELECT SUM(AMOUNT) from deposit where adate>'1995-03-01';
+-----+
| SUM(AMOUNT) |
+-----+
|      23200.00 |
+-----+
1 row in set (0.00 sec)

mysql>
```

5.List total deposit of customers living in city NAGPUR:

SELECT SUM(AMOUNT) FROM DEPOSIT D ,CUSTOMER C WHERE
C.CITY ='NAGPUR' AND D.CNAME=C.CNAME;

```
mysql> SELECT SUM(AMOUNT) FROM DEPOSIT D ,CUSTOMER C WHERE C.CITY ='NAGPUR' AND D.CNAME=C.CNAME;
+-----+
| SUM(AMOUNT) |
+-----+
|      4200.00 |
+-----+
1 row in set (0.00 sec)

mysql> _
```

6.List maximum deposit of customer living in Bombay:

SELECT MAX(AMOUNT) FROM DEPOSIT D, CUSTOMER C WHERE
C.CITY='BOMBAY' AND D.CNAME=C.CNAME;

```
mysql> SELECT MAX(AMOUNT) FROM DEPOSIT D, CUSTOMER C WHERE C.CITY='BOMBAY' AND D.CNAME=C.CNAME;
+-----+
| MAX(AMOUNT) |
+-----+
|      5000.00 |
+-----+
1 row in set (0.00 sec)

mysql> _
```

7.List total deposit of customer having branch in BOMBAY:

SELECT SUM(AMOUNT) FROM DEPOSIT D , CUSTOMER C WHERE
C.CITY='BOMBAY' AND D.CNAME=C.CNAME;

```
mysql> SELECT SUM(AMOUNT) FROM DEPOSIT D , CUSTOMER C WHERE C.CITY='BOMBAY' AND D.CNAME=C.CNAME;
+-----+
| SUM(AMOUNT) |
+-----+
|      6000.00 |
+-----+
1 row in set (0.00 sec)
```

8.Count total number of branch cities

SELECT COUNT(CITY) FROM BRANCH ;

```
ERROR 1630 (42000): FUNCTION db.COUNT does not exist. Check
mysql> SELECT COUNT(CITY) FROM BRANCH ;
+-----+
| COUNT(CITY) |
+-----+
|          10 |
+-----+
1 row in set (0.00 sec)
```

9.Count total number of customers cities

SELECT count(city) from CUSTOMER;

```
mysql> SELECT count(city) from CUSTOMER;
+-----+
| count(city) |
+-----+
|          11 |
+-----+
1 row in set (0.00 sec)

mysql> SELECT count(city) from CUSTOMER;_
```

10.Give branch names and branch wise deposit

SELECT BNAME , SUM(AMOUNT) FROM DEPOSIT GROUP BY BNAME;

```
mysql> SELECT C1.CITY , SUM(D1.AMOUNT) FROM CUSTOMER C1 , DEPOSIT D1 WHERE D1.CNAME = C1.CNAME GROUP BY C1.CITY;
+-----+-----+
| CITY      | SUM(D1.AMOUNT) |
+-----+-----+
| CALCUTTA  | 1000.00         |
| DELHI     | 500.00          |
| BARODA    | 3500.00         |
| NAGPUR    | 4200.00         |
| SURAT     | 2000.00         |
| BOMBAY    | 6000.00         |
| POWAI     | 7000.00         |
+-----+-----+
7 rows in set (0.00 sec)
```

11.Give city wise name and branch wise deposit

SELECT C1.CITY , SUM(D1.AMOUNT) FROM CUSTOMER C1 , DEPOSIT
D1 WHERE D1.CNAME = C1.CNAME GROUP BY C1.CITY;

```
mysql> SELECT C1.CITY , SUM(D1.AMOUNT) FROM CUSTOMER C1 , DEPOSIT D1 WHERE D1.CNAME = C1.CNAME GROUP BY C1.CITY;
```

CITY	SUM(D1.AMOUNT)
CALCUTTA	1000.00
DELHI	500.00
BARODA	3500.00
NAGPUR	4200.00
SURAT	2000.00
BOMBAY	6000.00
POWAI	7000.00

```
7 rows in set (0.00 sec)
```

12. Give the branch wise loan of customer living in NAGPUR

SELECT B.BNAME, SUM(B.AMOUNT) FROM BORROW B, CUSTOMER C WHERE C.CITY='NAGPUR' AND C.CNAME=B.CNAME GROUP BY B.BNAME;

```
mysql> SELECT B.BNAME, SUM(B.AMOUNT) FROM BORROW B, CUSTOMER C WHERE C.CITY='NAGPUR' AND C.CNAME=B.CNAME GROUP BY B.BNAME;
```

BNAME	SUM(B.AMOUNT)
ANDHERI	22000.00
VIRAR	8000.00

```
2 rows in set (0.00 sec)
```

13. Count total number of customers

SELECT count(cname) from CUSTOMER;

```
mysql> SELECT count(cname) from CUSTOMER;
```

count(cname)
11

```
1 row in set (0.00 sec)
```

14. Count total number of depositors branch wise

SELECT D.BName, count(*) from DEPOSIT D , CUSTOMER C where D.CNAME = C.CNAME group by BNAME;

```
mysql> SELECT D.BName, count(*) from DEPOSIT D , CUSTOMER C where D.CNAME = C.CNAME group by BNAME;
```

BName	count(*)
VRCE	1
AJNI	1
KAROLBAGH	1
CHANDNI	1
MG ROAD	1
ANDHERI	1
VIRAR	1
NEHRU PALACE	1
POWAI	1

```
9 rows in set (0.00 sec)
```

15. Give maximum loan from branch VRCE

SELECT MAX(AMOUNT) FROM BORROW WHERE BNAME ='VRCE';

```
mysql> SELECT MAX(AMOUNT) FROM BORROW WHERE BNAME ='VRCE';
+-----+
| MAX(AMOUNT) |
+-----+
|      1000.00 |
+-----+
1 row in set (0.00 sec)
```

16. Give the number of customers who are depositors as well as borrowers:

SELECT DISTINCT CNAME FROM DEPOSIT INNER JOIN BORROW
USING(CNAME);

OR

SELECT DISTINCT CNAME FROM DEPOSIT WHERE CNAME IN (SELECT
CNAME FROM BORROW);

```
mysql> SELECT DISTINCT CNAME FROM DEPOSIT WHERE CNAME IN (SELECT CNAME FROM BORROW);
+-----+
| CNAME |
+-----+
| ANIL  |
| KRANTI |
| MADHURI |
| MEHUL |
| PRAMOD |
| SUNIL |
+-----+
6 rows in set (0.01 sec)

mysql> _
```

EXPERIMENT NO.6 : 10/05/2021

SET OPERATIONS

/*1. List all the customers who are depositors but not borrowers.*/

SELECT CNAME FROM DEPOSIT MINUS SELECT CNAME FROM BORROW;



/*2. List all the customers who are both depositors and borrowers*/

SELECT CNAME FROM DEPOSIT UNION SELECT CNAME FROM BORROW;

```
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'UNION SELECT CNAME FROM BORROW;' at line 1
mysql> SELECT CNAME FROM DEPOSIT UNION SELECT CNAME FROM BORROW;
+-----+
| CNAME |
+-----+
| ANIL  |
| KRANTI|
| MADHURI|
| MEHUL |
| MINU  |
| PRAMOD|
| SANDIP|
| SHIVANI|
| SUNIL |
+-----+
9 rows in set (0.00 sec)

mysql>
```

/*3. List all the depositors having deposit in all the branches where Sunil is having Account*/

SELECT D1.CNAME FROM DEPOSIT D1 WHERE D1.BNAME IN (SELECT D2.BNAME FROM DEPOSIT D2 WHERE D2.CNAME = 'SUNIL');

```
mysql> SELECT D1.CNAME FROM DEPOSIT D1 WHERE D1.BNAME IN (SELECT D2.BNAME FROM DEPOSIT D2 WHERE D2.CNAME = 'SUNIL' );
+-----+
| CNAME |
+-----+
| SUNIL |
| SANAL |
+-----+
2 rows in set (0.00 sec)

mysql>
```

/*4. List all the customers living in city NAGPUR and having branch city BOMBAY or DELHI*/

SELECT C1.CNAME FROM CUSTOMER C1,DEPOSIT D1, BRANCH B1
WHERE C1.CITY = 'NAGPUR' AND C1.CNAME = D1.CNAME AND
D1.BNAME = B1.BNAME AND B1.CITY IN ('BOMBAY','DELHI');

```
mysql> SELECT C1.CNAME FROM CUSTOMER C1,DEPOSIT D1, BRANCH B1 WHERE C1.CITY = 'NAGPUR' AND C1.CNAME = D1.CNAME AND D1.BNAME = B1.BNAME AND B1.CITY IN ('BOMBAY','DELHI');
+-----+
| CNAME |
+-----+
| MADHURI |
+-----+
1 row in set (0.00 sec)

mysql> _
```

/*5. List all the depositors living in city NAGPUR*/

SELECT Distinct(CUSTOMER.CNAME) from CUSTOMER,DEPOSIT
WHERE City='NAGPUR';

```
mysql> SELECT Distinct(CUSTOMER.CNAME) from CUSTOMER,DEPOSIT WHERE City='NAGPUR';
+-----+
| CNAME |
+-----+
| PRAMOD |
| MADHURI |
+-----+
2 rows in set (0.00 sec)

mysql> _
```

/*6. List all the depositors living in the city NAGPUR and having branch in city BOMBAY*/

SELECT C1.CNAME FROM CUSTOMER C1,DEPOSIT D1, BRANCH B1
WHERE C1.CITY = 'NAGPUR' AND C1.CNAME = D1.CNAME AND
D1.BNAME = B1.BNAME AND B1.CITY IN ('BOMBAY');

```
mysql> SELECT C1.CNAME FROM CUSTOMER C1,DEPOSIT D1, BRANCH B1 WHERE C1.CITY = 'NAGPUR' AND C1.CNAME = D1.CNAME AND D1.BNAME = B1.BNAME AND B1.CITY IN ('BOMBAY');
+-----+
| CNAME |
+-----+
| BINU |
+-----+
1 row in set (0.00 sec)

mysql> _
```

/*7. List the branch cities of Anil and Sunil*/

SELECT B1.CITY FROM DEPOSIT D1, BRANCH B1 WHERE D1.BNAME = B1.BNAME AND D1.CNAME IN ('SUNIL','ANIL');

```
1 row in set (0.00 sec)

mysql> SELECT B1.CITY FROM DEPOSIT D1, BRANCH B1 WHERE D1.BNAME = B1.BNAME AND D1.CNAME IN ('SUNIL','ANIL');
+-----+
| CITY |
+-----+
| NAGPUR |
| NAGPUR |
+-----+
2 rows in set (0.00 sec)

mysql> _
```

/*11. List all the cities where branches of Anil and Sunil are locate*/

SELECT B1.CITY FROM BRANCH B1 WHERE B1.BNAME IN (SELECT D1.BNAME FROM DEPOSIT D1 WHERE D1.CNAME IN ('ANIL','SUNIL'));

```
mysql> SELECT B1.CITY FROM BRANCH B1 WHERE B1.BNAME IN (SELECT D1.BNAME FROM DEPOSIT D1 WHERE D1.CNAME IN ('ANIL','SUNIL'));
+-----+
| CITY |
+-----+
| NAGPUR |
| NAGPUR |
+-----+
2 rows in set (0.00 sec)

mysql>
```

EXPERIMENT NO.7 : 10/05/2021

JOIN OR CARTESIAN PRODUCT

/*1.Give name of customers having living city BOMBAY and branch city NAGPUR*/

SELECT D1.CNAME,D1.BNAME,C1.CNAME,C1.CITY,B1.CITY,B1.BNAME FROM DEPOSIT D1,CUSTOMER C1,BRANCH B1 WHERE C1.CITY = 'BOMBAY' AND B1.CITY = 'NAGPUR' AND D1.CNAME = C1.CNAME AND D1.BNAME = B1.BNAME;

```
Query OK, 1 row affected (0.01 sec)

mysql> SELECT D1.CNAME,D1.BNAME,C1.CNAME,C1.CITY,B1.CITY,B1.BNAME FROM DEPOSIT D1,CUSTOMER C1,BRANCH B1 WHERE C1.CITY = 'BOMBAY' AND B1.CITY = 'NAGPUR' AND D1.CNAME = C1.CNAME AND D1.BNAME = B1.BNAME;
+-----+-----+-----+-----+-----+-----+
| CNAME | BNAME | CNAME | CITY | CITY | BNAME |
+-----+-----+-----+-----+-----+-----+
| SAN   | DHARAMPETH | SAN   | BOMBAY | NAGPUR | DHARAMPETH |
+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql> _
```


/*2.Give names of customers having the same living city as their branch city*/

```
SELECT DISTINCT C.CNAME FROM CUSTOMER C WHERE C.CITY IN (
SELECT DISTINCT B.CITY FROM BRANCH B WHERE B.BNAME IN
(SELECT D.BNAME FROM DEPOSIT D WHERE D.CNAME = C.CNAME));
```

OR

```
SELECT DISTINCT C.CNAME,C.CITY FROM CUSTOMER C JOIN BRANCH
B ON B.CITY = C.CITY JOIN DEPOSIT D ON B.BNAME = D.BNAME JOIN
CUSTOMER ON C.CNAME = D.CNAME;
```

```
mysql> SELECT DISTINCT C.CNAME
+-----+
| CNAME |
+-----+
| MINU  |
| SHIVANI |
+-----+
2 rows in set (0.00 sec)
```

/*3.Give names of customers who are borrowers as well as depositors and having city NAGPUR.*/

```
SELECT C1.CNAME FROM CUSTOMER C1,DEPOSIT D1,BORROW B1
WHERE C1.CITY='NAGPUR' AND C1.CNAME=D1.CNAME AND
D1.CNAME = B1.CNAME;
```

```
mysql> SELECT DISTINCT C1.CNAME FROM CUSTOMER C1,DEPOSIT D1,BORROW B1 W
+-----+
| CNAME |
+-----+
| MADHURI |
| PRAMOD  |
+-----+
2 rows in set (0.00 sec)
```

/*4.Give names of borrowers having deposit amount greater than 1000 and loan amount greater than 2000.*/

```
SELECT BR1.CNAME, BR1.AMOUNT, D1.CNAME, D1.AMOUNT FROM
BORROW BR1,DEPOSIT D1 WHERE D1.CNAME = BR1.CNAME AND
D1.AMOUNT > 1000 AND BR1.AMOUNT > 2000;
```

```
mysql> SELECT BR1.CNAME, BR1.AMOUNT, D1.CNAME, D1.AMOUNT FROM BORROW BR1,DEPOSIT D1 WHERE BR1.BNAME=D1.BNAME;
+-----+-----+-----+-----+
| CNAME | AMOUNT | CNAME | AMOUNT |
+-----+-----+-----+-----+
| MEHUL | 5000.00 | MEHUL | 3500.00 |
| PRAMOD | 20000.00 | PRAMOD | 3000.00 |
| PRAMOD | 8000.00 | PRAMOD | 3000.00 |
| KRANTI | 3000.00 | KRANTI | 5000.00 |
+-----+-----+-----+-----+
4 rows in set (0.00 sec)
```

/*5.Give names of depositors having the same branch as the branch of Sunil*/

```
SELECT D1.CNAME FROM DEPOSIT D1 WHERE D1.BNAME IN (SELECT D2.BNAME FROM DEPOSIT D2 WHERE D2.CNAME = 'SUNIL');
```

/*6.Give names of borrowers having loan amount greater than the loan amount of Pramod*/

```
SELECT BR1.CNAME,BR1.AMOUNT FROM BORROW BR1 WHERE BR1.AMOUNT > ALL (SELECT BR2.AMOUNT FROM BORROW BR2 WHERE BR2.CNAME = 'PRAMOD');
```

```
mysql> SELECT BR1.CNAME,BR1.AMOUNT FROM BORROW BR1 WHERE BR1.AMOUNT > ALL (SELECT BR2.AMOUNT FROM BORROW BR2 WHERE BR2.CNAME = 'PRAMOD');
+-----+-----+
| CNAME | AMOUNT |
+-----+-----+
| MEHUL | 25000.00 |
+-----+-----+
1 row in set (0.00 sec)
```

/*7.Give the name of the customer living in the city where branch of depositor Sunil is located.*/

```
SELECT C.CNAME FROM CUSTOMER C WHERE C.CITY IN (SELECT B.CITY FROM BRANCH B WHERE B.BNAME IN (SELECT D.BNAME FROM DEPOSIT D WHERE D.CNAME='SUNIL'));
```

```
mysql> SELECT C.CNAME FROM CUSTOMER C WHERE C.CITY IN (SELECT B.CITY FROM BRANCH B WHERE B.BNAME IN (SELECT D.BNAME FROM DEPOSIT D WHERE D.CNAME='SUNIL'));
+-----+
| CNAME |
+-----+
| BINU |
| MADHURI |
| PRAMOD |
+-----+
3 rows in set (0.00 sec)
```

/*8.Give branch city and living city of Pramod*/

SELECT B1.CITY , C1.CITY FROM BRANCH B1,CUSTOMER C1, DEPOSIT D1 WHERE C1.CNAME = 'PRAMOD' AND C1.CNAME = D1.CNAME AND D1.BNAME = B1.BNAME;

```
mysql> SELECT B1.CITY , C1.CITY FROM BRANCH B1,CUSTOMER C1, DEPOSIT D1 WHERE C1.CNAME = 'PRAMOD' AND C1.CNAME = D1.CNAME AND D1.BNAME = B1.BNAME;
+-----+-----+
| CITY   | CITY   |
+-----+-----+
| BANGALORE | NAGPUR |
+-----+-----+
1 row in set (0.00 sec)
```

/*9.Give branch city of Sunil and branch city of Anil*/

SELECT B1.CITY FROM DEPOSIT D1, BRANCH B1 WHERE D1.BNAME = B1.BNAME AND D1.CNAME IN ('SUNIL' , 'ANIL');

```
mysql> SELECT B1.CITY FROM DEPOSIT D1, BRANCH B1 WHERE D1.BNAME = B1.BNAME AND D1.CNAME IN ('SUNIL' , 'ANIL');
+-----+
| CITY   |
+-----+
| NAGPUR |
| NAGPUR |
+-----+
2 rows in set (0.00 sec)

mysql> _
```

/*10.Give the living city of Anil and the living city of Sunil*/

SELECT C1.CNAME, C1.CITY FROM CUSTOMER C1 WHERE C1.CNAME = 'ANIL' OR C1.CNAME = 'SUNIL';

```
mysql> SELECT C1.CNAME, C1.CITY FROM CUSTOMER C1 WHERE C1.CNAME = 'ANIL' OR C1.CNAME = 'SUNIL';
+-----+-----+
| CNAME | CITY   |
+-----+-----+
| ANIL  | CALCUTTA |
| SUNIL | DELHI   |
+-----+-----+
2 rows in set (0.00 sec)
```