

20MCA134-ADVANCED DBMS LAB

EXPERIMENTS

SUBMITTED BY,

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R MCA-2020-S2

ROLL NO : 42

SUBMITTED TO,

LISHA MISS

EXPERIMENT NO.4 : DATE, NUMBER AND CHARACTER FUNCTIONS

1. Using the customer table , create a select statement to display the results as shown in the table Customer name formatted

**** ANIL ##### ANIL ****

**** MEHUL ##### MEHUL ****

**** SUNIL ##### SUNIL ****

****MADHURI ##### MADHURI ****

****PRAMOD##### PRAMOD****

**** KRANTI ##### KRANTI ****

QUERY

```
SELECT CONCAT_WS (CUSTOMER_NAME, "****", "#####", "****") from Customer
```

OUTPUT

Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available.

Showing rows 0 - 9 (10 total, Query took 0.0016 seconds.)

```
SELECT CONCAT_WS(CUSTOMER_NAME, "****", "#####", "****") from Customer
```

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

+ Options

```
CONCAT_WS(CUSTOMER_NAME, "****", "#####", "****")
```

****ANIL#####ANIL****
****KRANTI#####KRANTI****
****MADHURI#####MADHURI****
****MANDAR#####MANDAR****
****MEHUL#####MEHUL****
****NAREN#####NAREN****
****PRAMOD#####PRAMOD****
****SANDIP#####SANDIP****
****SHIVANI#####SHIVANI****
****SUNIL#####SUNIL****

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

EXPERIMENT NO.5 : 10/05/2021

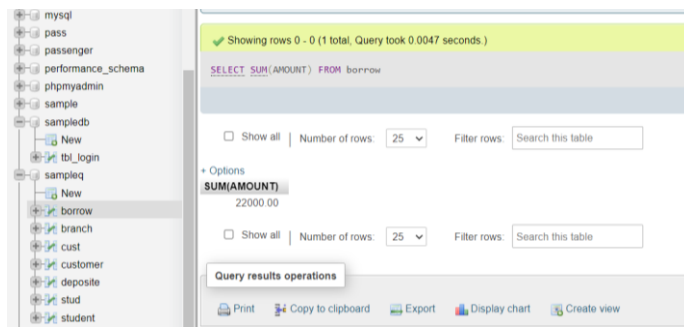
AGGREGATE FUNCTIONS

1.List total loan

QUERY

```
SELECT SUM(AMOUNT) FROM borrow
```

OUTPUT



The screenshot shows the MySQL Workbench interface. On the left is a tree view of the database schema. The main area displays the query results for the query `SELECT SUM(AMOUNT) FROM borrow`. The results show a single row with the value 22000.00. The interface includes a status bar at the top indicating 'Showing rows 0 - 0 (1 total, Query took 0.0047 seconds)'. Below the query, there are options to show all rows, a dropdown for the number of rows (set to 25), and a filter row search box. At the bottom, there are buttons for 'Print', 'Copy to clipboard', 'Export', 'Display chart', and 'Create view'.

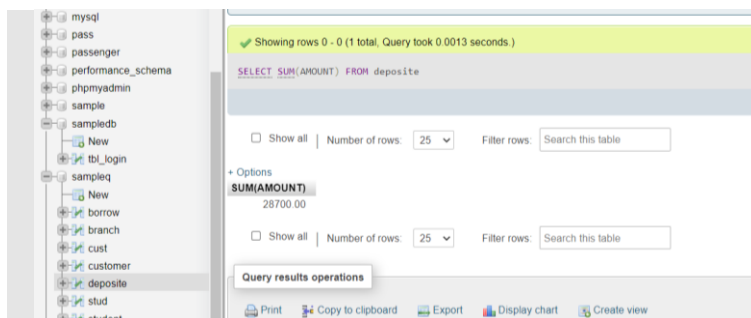
SUM(AMOUNT)
22000.00

2.List total deposit

QUERY

```
SELECT SUM(AMOUNT) FROM deposit
```

OUTPUT



The screenshot shows the MySQL Workbench interface. On the left is a tree view of the database schema. The main area displays the query results for the query `SELECT SUM(AMOUNT) FROM deposit`. The results show a single row with the value 28700.00. The interface includes a status bar at the top indicating 'Showing rows 0 - 0 (1 total, Query took 0.0013 seconds)'. Below the query, there are options to show all rows, a dropdown for the number of rows (set to 25), and a filter row search box. At the bottom, there are buttons for 'Print', 'Copy to clipboard', 'Export', 'Display chart', and 'Create view'.

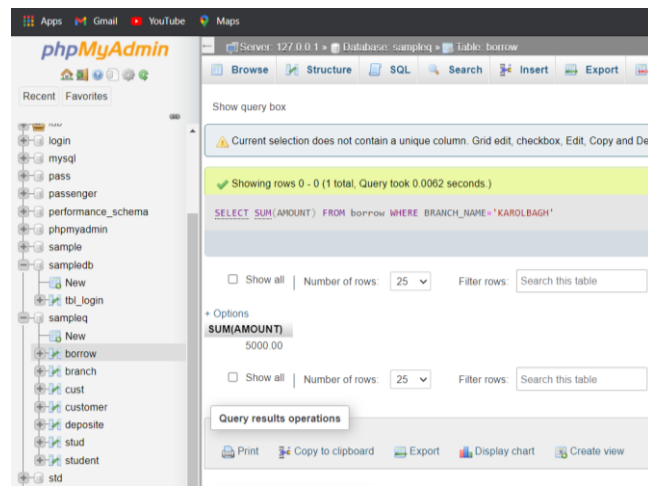
SUM(AMOUNT)
28700.00

3.List total loan taken from KAROLBAGH branch

QUERY

```
SELECT SUM(AMOUNT) FROM borrow WHERE BRANCH_NAME='KAROLBAGH'
```

OUTPUT

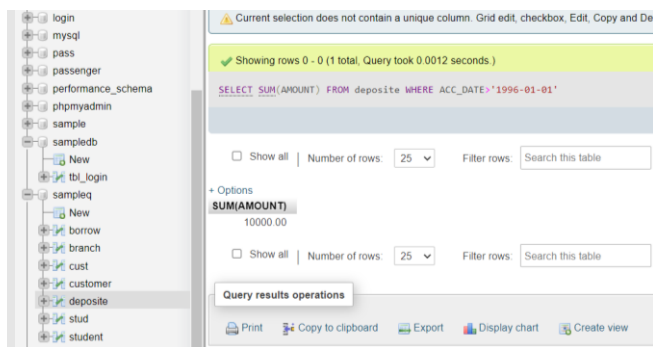


4. List total deposit of customers having account date later than 1-Jan-96

QUERY

```
SELECT SUM(AMOUNT) FROM deposit WHERE ACC_DATE > '1996-01-01'
```

OUTPUT

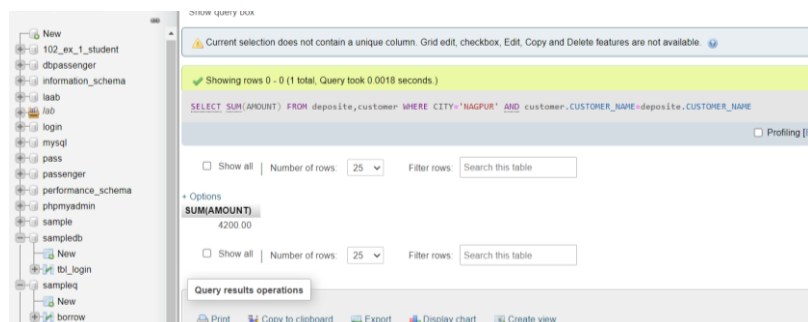


5. List total deposit of customers living in city NAGPUR

QUERY

```
SELECT SUM(AMOUNT) FROM deposit, customer WHERE CITY='NAGPUR' AND customer.CUSTOMER_NAME=deposit.CUSTOMER_NAME
```

OUTPUT

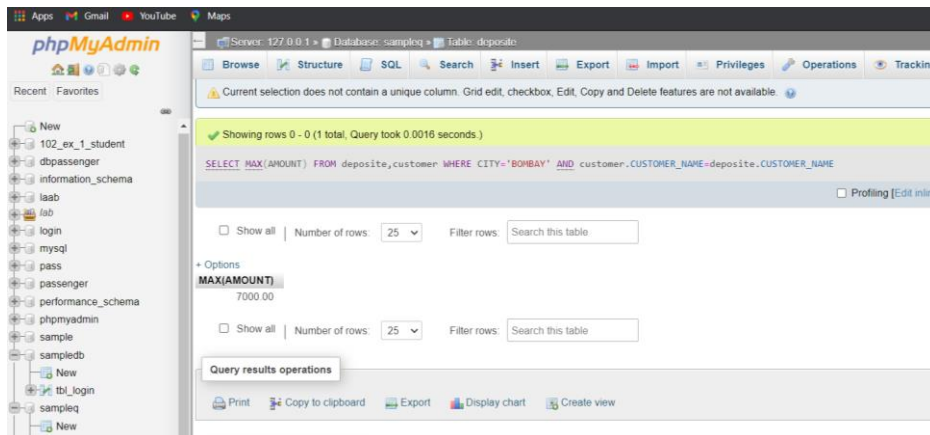


6. List maximum deposit of customer living in Bombay

QUERY

```
SELECT MAX(AMOUNT) FROM deposit, customer WHERE CITY='BOMBAY' AND customer.CUSTOMER_NAME=deposit.CUSTOMER_NAME
```

OUTPUT

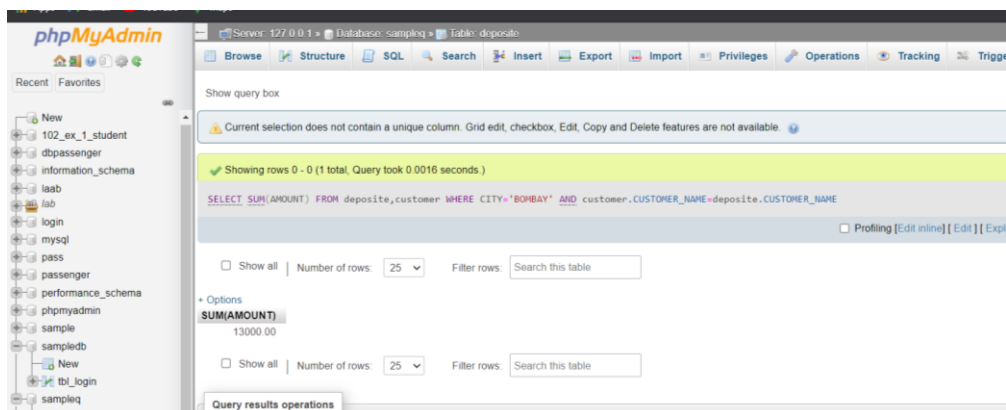


7. List total deposit of customer having branch in BOMBAY

QUERY

```
SELECT SUM(AMOUNT) FROM deposit, customer WHERE CITY='BOMBAY' AND customer.CUSTOMER_NAME=deposit.CUSTOMER_NAME
```

OUTPUT

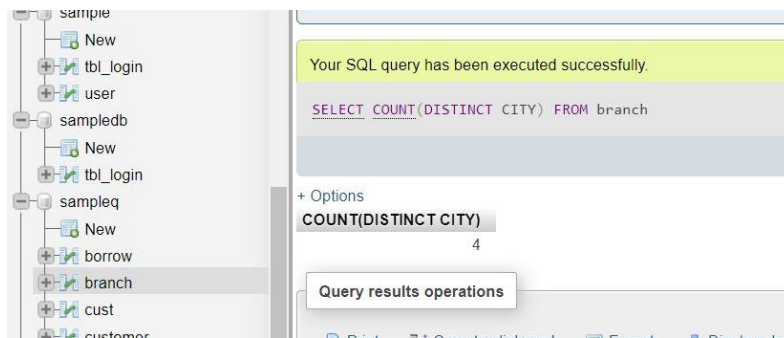


8. Count total number of branch cities

QUERY

```
SELECT COUNT(DISTINCT CITY) FROM branch
```

OUTPUT

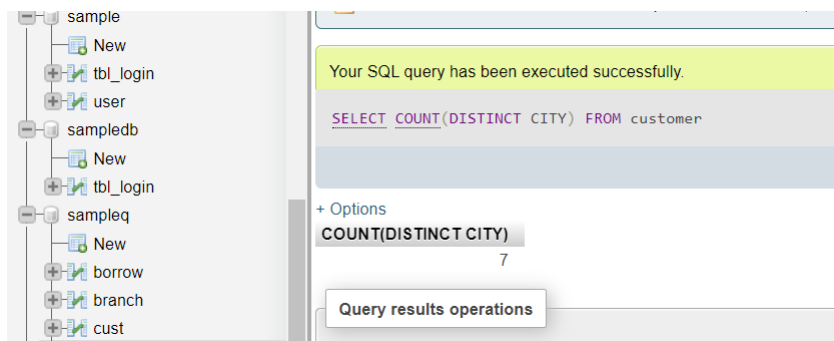


9.Count total number of customers cities

QUERY

```
SELECT COUNT(DISTINCT CITY) FROM customer
```

OUTPUT

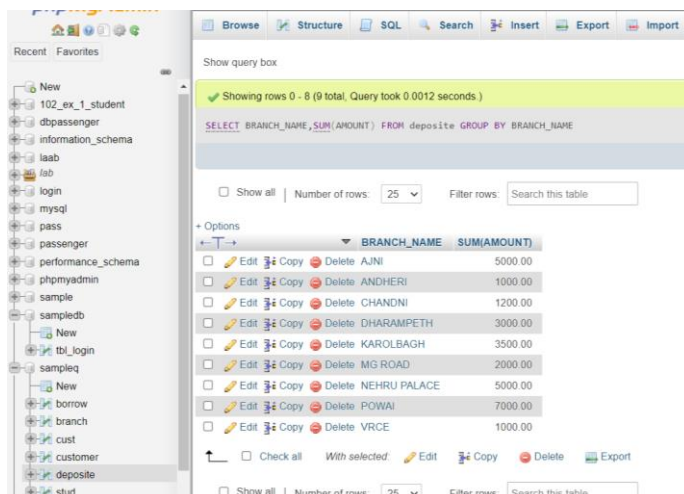


10.Give branch names and branch wise deposit

QUERY

```
SELECT BRANCH_NAME, SUM(AMOUNT) FROM deposit GROUP BY BRANCH_NAME
```

OUTPUT

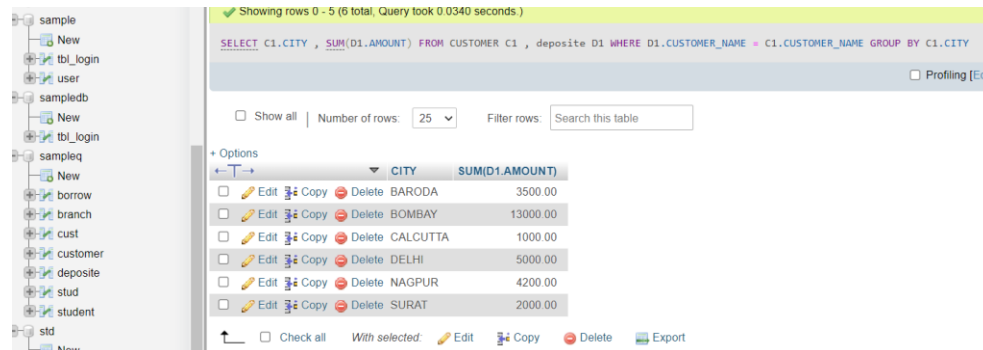


11. Give city wise name and branch wise deposit

QUERY

```
SELECT C1.CITY , SUM(D1.AMOUNT) FROM CUSTOMER C1 , deposit D1 WHERE D1.CUSTOMER_NAME = C1.CUSTOMER_NAME GROUP BY C1.CITY
```

OUTPUT



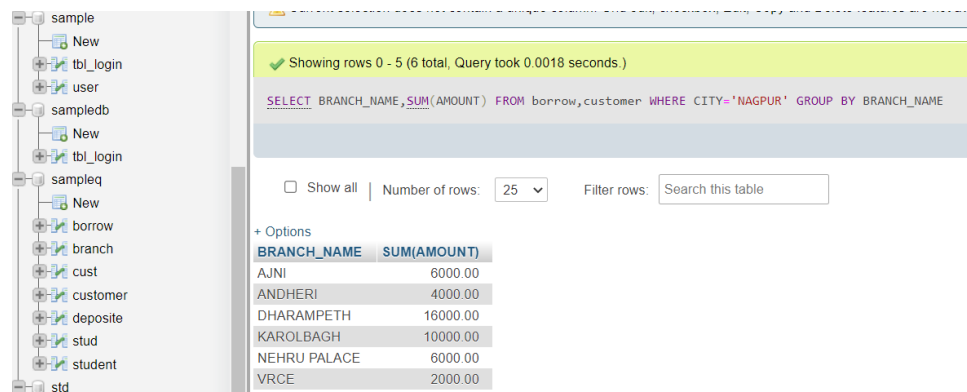
CITY	SUM(D1.AMOUNT)
BARODA	3500.00
BOMBAY	13000.00
CALCUTTA	1000.00
DELHI	5000.00
NAGPUR	4200.00
SURAT	2000.00

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

QUERY

```
SELECT BRANCH_NAME, SUM(AMOUNT) FROM borrow, customer WHERE CITY='NAGPUR' GROUP BY BRANCH_NAME
```

OUTPUT



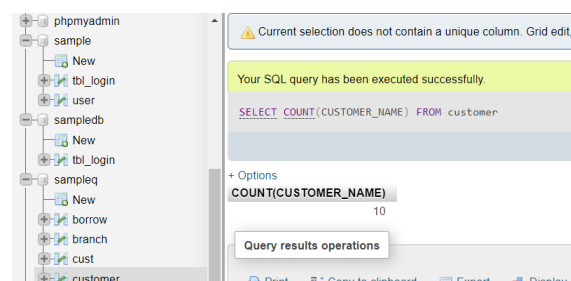
BRANCH_NAME	SUM(AMOUNT)
AJNI	6000.00
ANDHERI	4000.00
DHARAMPETH	16000.00
KAROLBAGH	10000.00
NEHRU PALACE	6000.00
VRCE	2000.00

13. Count total number of customers

QUERY

```
SELECT COUNT(CUSTOMER_NAME) FROM customer
```

OUTPUT



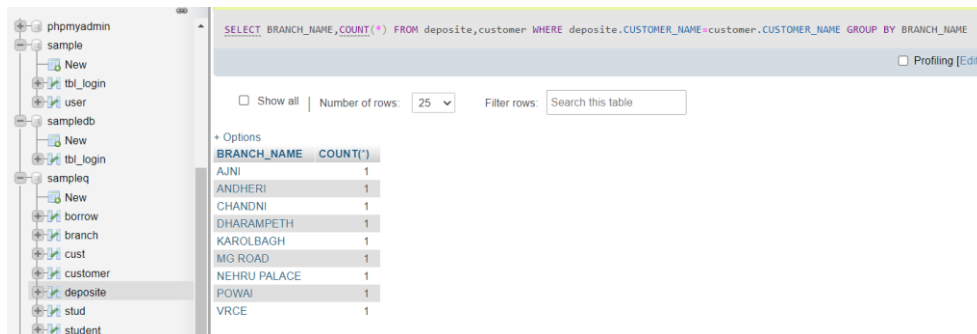
COUNT(CUSTOMER_NAME)
10

14.Count total number of depositors branch wise

QUERY

```
SELECT BRANCH_NAME, COUNT(*) FROM deposit, customer WHERE deposit.CUSTOMER_NAME=customer.CUSTOMER_NAME GROUP BY BRANCH_NAME
```

OUTPUT



The screenshot shows the phpMyAdmin interface with the 'deposit' table selected. The query editor displays the SQL query: `SELECT BRANCH_NAME, COUNT(*) FROM deposit, customer WHERE deposit.CUSTOMER_NAME=customer.CUSTOMER_NAME GROUP BY BRANCH_NAME`. The results table shows the count of depositors for each branch.

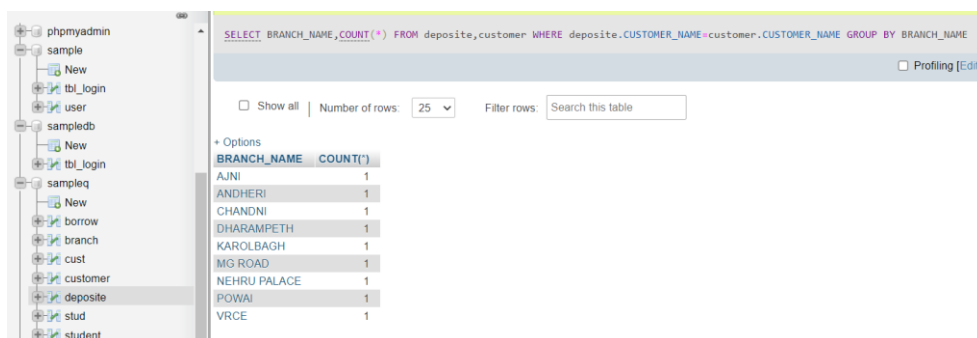
BRANCH_NAME	COUNT(*)
AJINI	1
ANDHERI	1
CHANDNI	1
DHARAMPETH	1
KAROLBAGH	1
MG ROAD	1
NEHRU PALACE	1
POWAI	1
VRCE	1

15.Count total number of depositors branch wise

QUERY

```
SELECT BRANCH_NAME, COUNT(*) FROM deposit, customer WHERE deposit.CUSTOMER_NAME=customer.CUSTOMER_NAME GROUP BY BRANCH_NAME
```

OUTPUT



The screenshot shows the phpMyAdmin interface with the 'deposit' table selected. The query editor displays the SQL query: `SELECT BRANCH_NAME, COUNT(*) FROM deposit, customer WHERE deposit.CUSTOMER_NAME=customer.CUSTOMER_NAME GROUP BY BRANCH_NAME`. The results table shows the count of depositors for each branch.

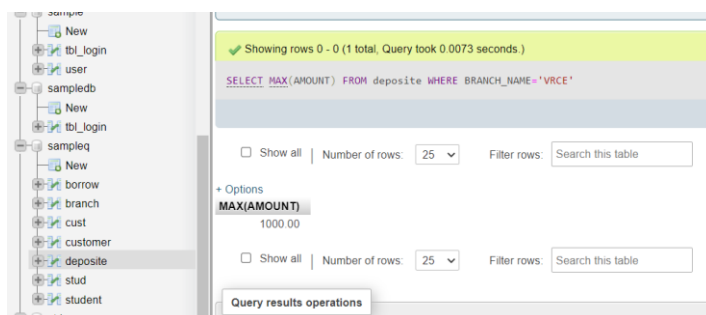
BRANCH_NAME	COUNT(*)
AJINI	1
ANDHERI	1
CHANDNI	1
DHARAMPETH	1
KAROLBAGH	1
MG ROAD	1
NEHRU PALACE	1
POWAI	1
VRCE	1

16.Give maximum loan from branch VRCE

QUERY

```
SELECT MAX(AMOUNT) FROM deposit WHERE BRANCH_NAME='VRCE'
```

OUTPUT



The screenshot shows the phpMyAdmin interface with the 'deposit' table selected. The query editor displays the SQL query: `SELECT MAX(AMOUNT) FROM deposit WHERE BRANCH_NAME='VRCE'`. The results table shows the maximum loan amount for the VRCE branch.

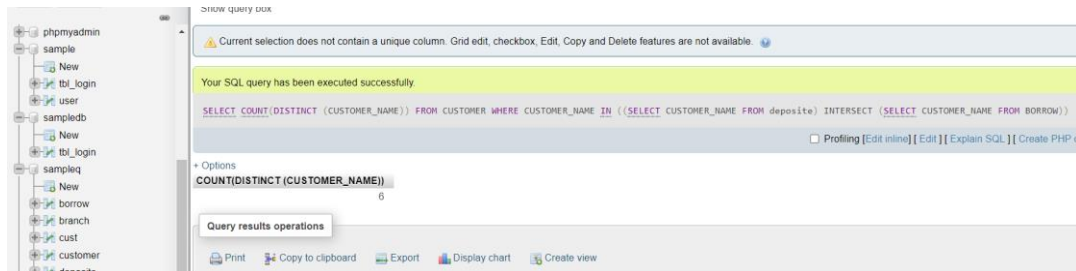
MAX(AMOUNT)
1000.00

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

QUERY

```
SELECT COUNT(DISTINCT (CUSTOMER_NAME)) FROM CUSTOMER WHERE CUSTOMER_NAME IN  
((SELECT CUSTOMER_NAME FROM deposit) INTERSECT (SELECT CUSTOMER_NAME FROM  
BORROW))
```

OUTPUT



The screenshot displays the phpMyAdmin interface. On the left, a sidebar shows the database structure with a tree view including 'sample', 'tbl_login', 'user', 'sampledb', 'tbl_login', 'sampleq', 'New', 'borrow', 'branch', 'cust', 'customer', and 'deposit'. The main area is titled 'Show query box' and contains a message: 'Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available.' Below this, a green banner states 'Your SQL query has been executed successfully'. The executed query is: `SELECT COUNT(DISTINCT (CUSTOMER_NAME)) FROM CUSTOMER WHERE CUSTOMER_NAME IN ((SELECT CUSTOMER_NAME FROM deposit) INTERSECT (SELECT CUSTOMER_NAME FROM BORROW))`. Below the query, there are links for 'Profiling', 'Edit inline', 'Edit', 'Explain SQL', and 'Create PHP c'. The 'Options' section shows 'COUNT(DISTINCT(CUSTOMER_NAME))' with a value of '6'. At the bottom, there is a 'Query results operations' bar with buttons for 'Print', 'Copy to clipboard', 'Export', 'Display chart', and 'Create view'.

EXPERIMENT NO.6 : 10/05/2021

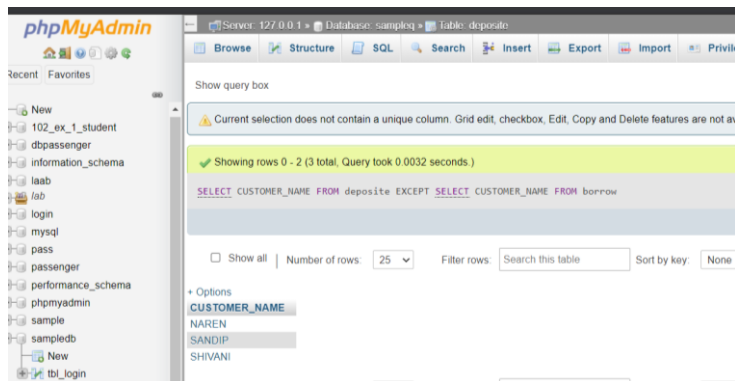
SET OPERATIONS

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

QUERY

```
SELECT CUSTOMER_NAME FROM deposit EXCEPT SELECT CUSTOMER_NAME FROM borrow
```

OUTPUT

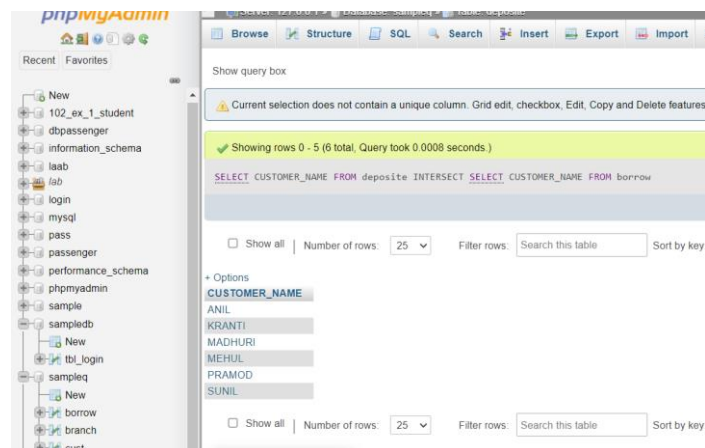


2. List all the customers who are both depositors and borrowers

QUERY

```
SELECT CUSTOMER_NAME FROM deposit INTERSECT SELECT CUSTOMER_NAME FROM borrow
```

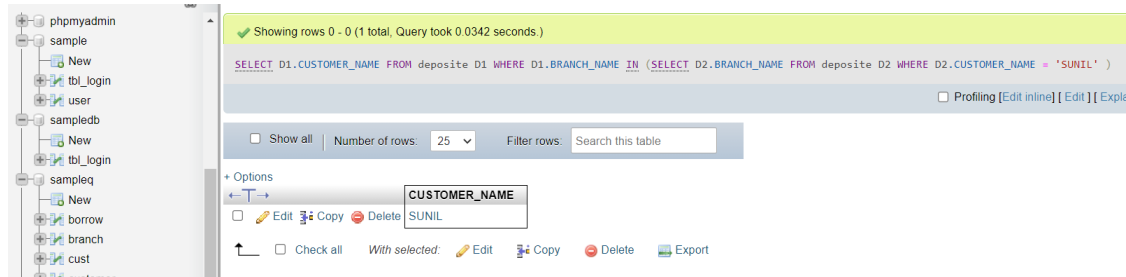
OUTPUT



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

QUERY

```
SELECT D1.CUSTOMER_NAME FROM deposit D1 WHERE D1.BRANCH_NAME IN (SELECT D2.BRANCH_NAME FROM deposit D2 WHERE D2.CUSTOMER_NAME = 'SUNIL' )
```



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

QUERY

```
SELECT C1.CUSTOMER_NAME FROM customer C1, deposit D1, branch B1 WHERE C1.CITY = 'NAGPUR' AND C1.CUSTOMER_NAME = D1.CUSTOMER_NAME AND D1.BRANCH_NAME = B1.BRANCH_NAME AND B1.CITY IN ('BOMBAY', 'DELHI')
```

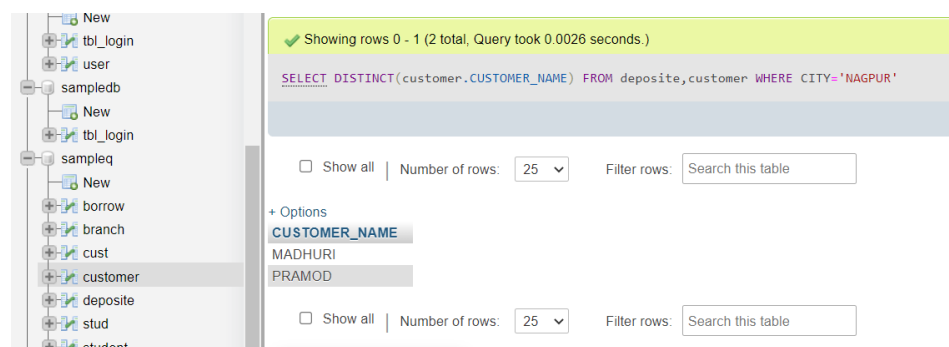
OUTPUT



5. List all the depositors living in city NAGPUR

QUERY

```
SELECT DISTINCT(customer.CUSTOMER_NAME) FROM deposit, customer WHERE CITY = 'NAGPUR'
```

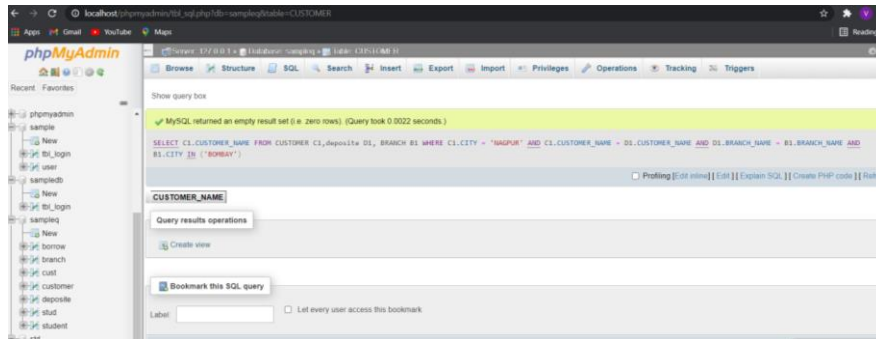


6. List all the depositors living in the city NAGPUR and having branch in city BOMBAY

QUERY

```
SELECT C1.CUSTOMER_NAME FROM CUSTOMER C1,deposit D1, BRANCH B1 WHERE C1.CITY = 'NAGPUR' AND C1.CUSTOMER_NAME = D1.CUSTOMER_NAME AND D1.BRANCH_NAME = B1.BRANCH_NAME AND B1.CITY IN ('BOMBAY')
```

OUTPUT

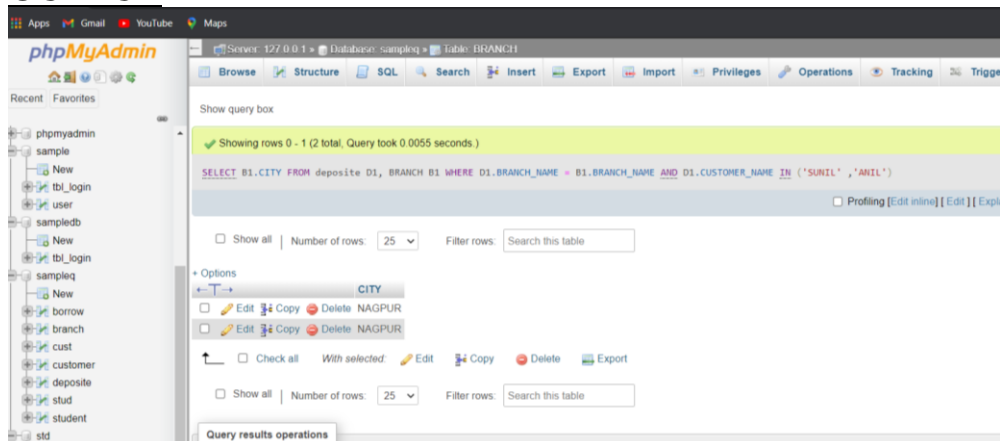


7. List the branch cities of Anil and Sunil

QUERY

```
SELECT B1.CITY FROM deposit D1, BRANCH B1 WHERE D1.BRANCH_NAME = B1.BRANCH_NAME AND D1.CUSTOMER_NAME IN ('SUNIL', 'ANIL')
```

OUTPUT

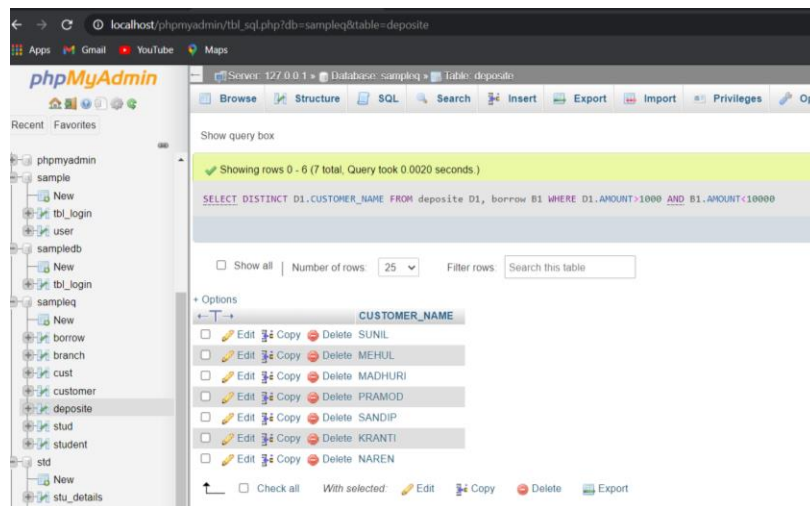


8. List the customers having deposit greater than 1000 and loan less than 10000.

QUERY

```
SELECT DISTINCT D1.CUSTOMER_NAME FROM deposit D1, borrow B1 WHERE D1.AMOUNT > 1000 AND B1.AMOUNT < 10000
```

OUTPUT

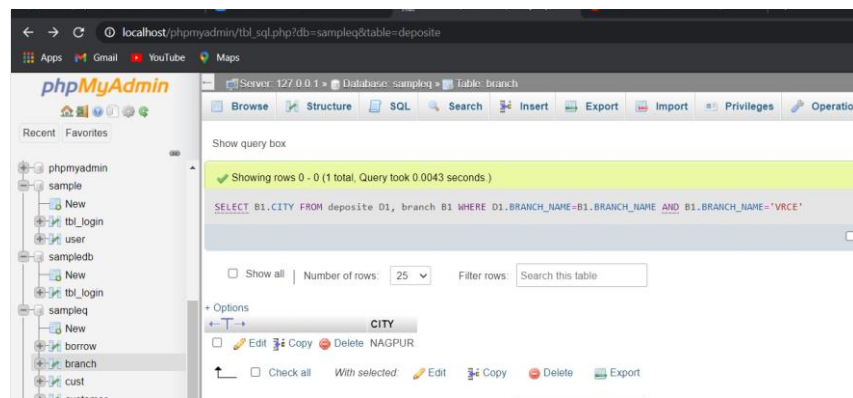


9. List the cities of depositors having branch VRCE.

QUERY

```
SELECT B1.CITY FROM deposit D1, branch B1 WHERE D1.BRANCH_NAME=B1.BRANCH_NAME AND B1.BRANCH_NAME='VRCE'
```

OUTPUT

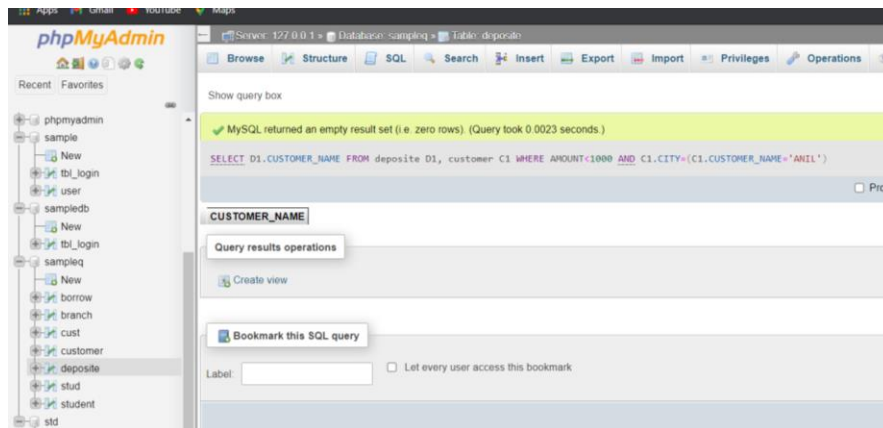


10. List the depositors having amount less than 1000 and living in the same city as Anil

QUERY

```
SELECT D1.CUSTOMER_NAME FROM deposit D1, customer C1 WHERE AMOUNT<1000 AND C1.CITY=(C1.CUSTOMER_NAME='ANIL')
```

OUTPUT

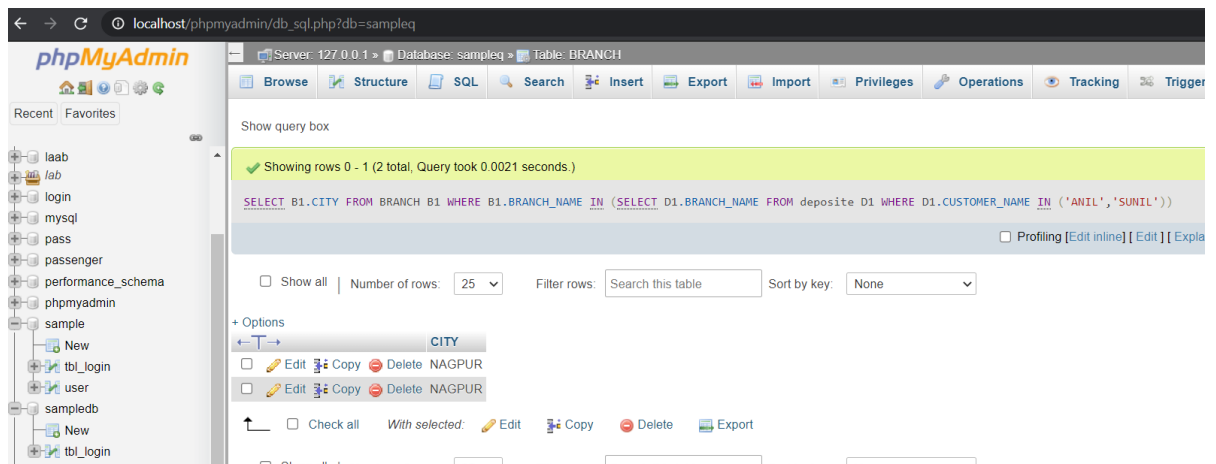


11. List all the cities where branches of Anil and Sunil are located

QUERY

```
SELECT B1.CITY FROM BRANCH B1 WHERE B1.BRANCH_NAME IN (SELECT D1.BRANCH_NAME FROM deposit D1 WHERE D1.CUSTOMER_NAME IN ('ANIL','SUNIL'))
```

OUTPUT

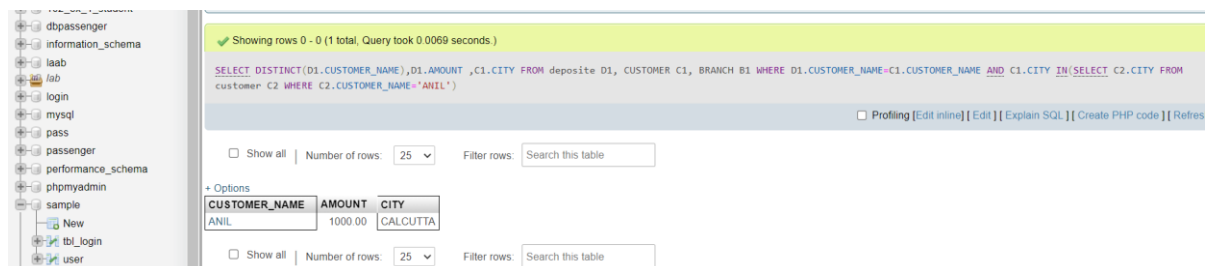


12. List the amount for the depositors living in the city where Anil is living

QUERY

```
SELECT DISTINCT(D1.CUSTOMER_NAME), D1.AMOUNT, C1.CITY FROM deposit D1, CUSTOMER C1, BRANCH B1 WHERE D1.CUSTOMER_NAME=C1.CUSTOMER_NAME AND C1.CITY IN (SELECT C2.CITY FROM customer C2 WHERE C2.CUSTOMER_NAME='ANIL')
```

OUTPUT



EXPERIMENT NO.7 : 10/05/2021

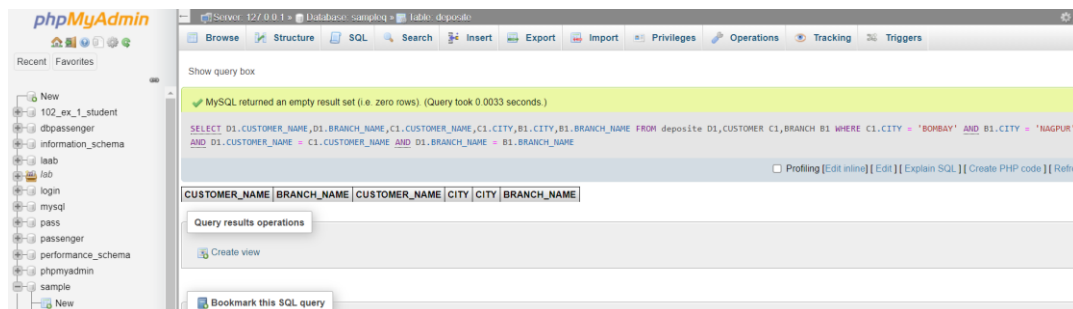
JOIN OR CARTESIAN PRODUCT

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

QUERY

```
SELECT D1.CUSTOMER_NAME, D1.BRANCH_NAME, C1.CUSTOMER_NAME, C1.CITY, B1.CITY, B1.BRANCH_NAME FROM deposit D1, CUSTOMER C1, BRANCH B1 WHERE C1.CITY = 'BOMBAY' AND B1.CITY = 'NAGPUR' AND D1.CUSTOMER_NAME = C1.CUSTOMER_NAME AND D1.BRANCH_NAME = B1.BRANCH_NAME
```

OUTPUT

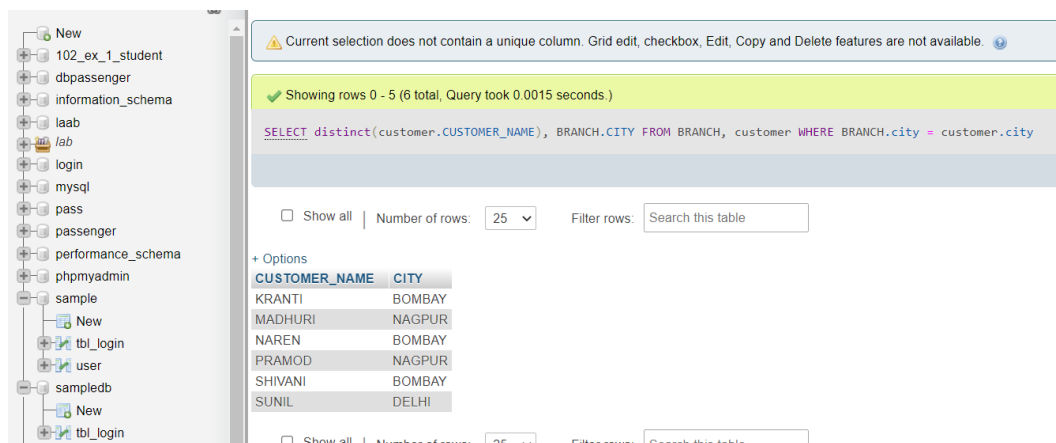


2. Give names of customers having the same living city as their branch city

QUERY

```
SELECT distinct(customer.CUSTOMER_NAME), BRANCH.CITY FROM BRANCH, customer WHERE BRANCH.city = customer.city
```

OUTPUT

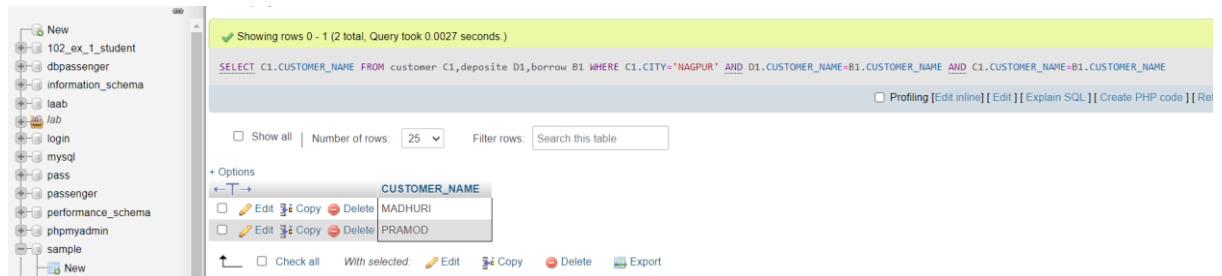


3. Give names of customers who are borrowers as well as depositors and having city NAGPUR.

QUERY

```
SELECT C1.CUSTOMER_NAME FROM customer C1,deposit D1,borrow B1 WHERE C1.CITY='NAGPUR' AND D1.CUSTOMER_NAME=B1.CUSTOMER_NAME AND C1.CUSTOMER_NAME=B1.CUSTOMER_NAME
```

OUTPUT



Showing rows 0 - 1 (2 total, Query took 0.0027 seconds)

```
SELECT C1.CUSTOMER_NAME FROM customer C1,deposit D1,borrow B1 WHERE C1.CITY='NAGPUR' AND D1.CUSTOMER_NAME=B1.CUSTOMER_NAME AND C1.CUSTOMER_NAME=B1.CUSTOMER_NAME
```

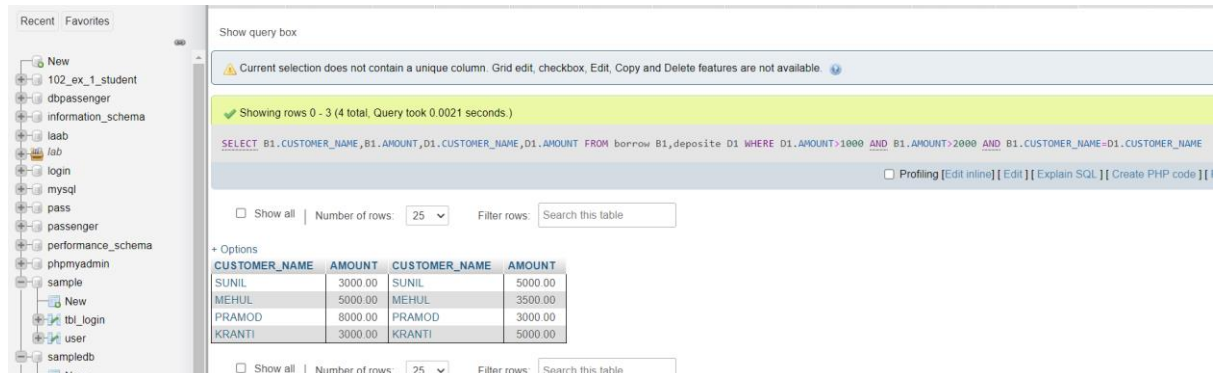
CUSTOMER_NAME
MADHURI
PRAMOD

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

QUERY

```
SELECT B1.CUSTOMER_NAME,B1.AMOUNT,D1.CUSTOMER_NAME,D1.AMOUNT FROM borrow B1,deposit D1 WHERE D1.AMOUNT>1000 AND B1.AMOUNT>2000 AND B1.CUSTOMER_NAME=D1.CUSTOMER_NAME
```

OUTPUT



Showing rows 0 - 3 (4 total, Query took 0.0021 seconds)

```
SELECT B1.CUSTOMER_NAME,B1.AMOUNT,D1.CUSTOMER_NAME,D1.AMOUNT FROM borrow B1,deposit D1 WHERE D1.AMOUNT>1000 AND B1.AMOUNT>2000 AND B1.CUSTOMER_NAME=D1.CUSTOMER_NAME
```

CUSTOMER_NAME	AMOUNT	CUSTOMER_NAME	AMOUNT
SUNIL	3000.00	SUNIL	5000.00
MEHUL	5000.00	MEHUL	3500.00
PRAMOD	8000.00	PRAMOD	3000.00
KRANTI	3000.00	KRANTI	5000.00

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

QUERY

```
SELECT D1.CUSTOMER_NAME FROM deposit D1 WHERE D1.BRANCH_NAME IN (SELECT D2.BRANCH_NAME FROM deposit D2 WHERE D2.CUSTOMER_NAME='SUNIL')
```

OUTPUT

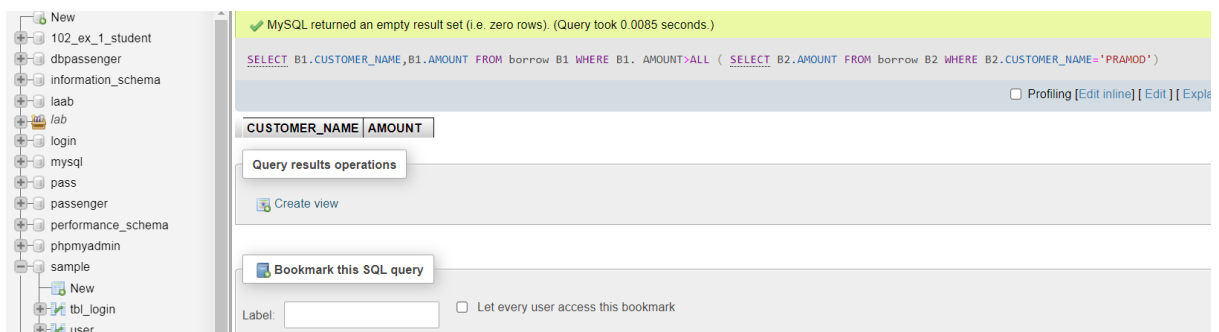


6. Give names of borrowers having loan amount greater than the loan amount of Pramod

QUERY

```
SELECT B1.CUSTOMER_NAME,B1.AMOUNT FROM borrow B1 WHERE B1.AMOUNT>ALL
( SELECT B2.AMOUNT FROM borrow B2 WHERE B2.CUSTOMER_NAME='PRAMOD' )
```

OUTPUT



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

QUERY

```
SELECT C1.CUSTOMER_NAME FROM CUSTOMER C1 WHERE C1.CITY IN (SELECT B1.
CITY FROM BRANCH B1 WHERE B1.BRANCH_NAME IN (SELECT D1.BRANCH_NAME FR
OM deposit D1 WHERE D1.CUSTOMER_NAME='SUNIL' ) )
```

OUTPUT

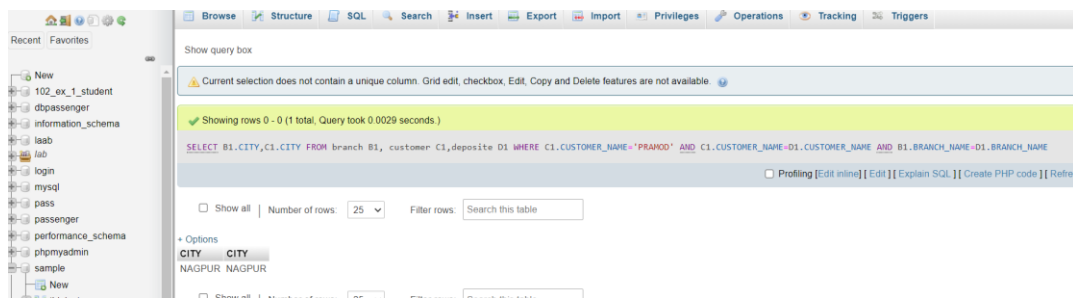


8. Give branch city and living city of Pramod

QUERY

```
SELECT B1.CITY,C1.CITY FROM branch B1, customer C1,deposit D1 WHERE
C1.CUSTOMER_NAME='PRAMOD' AND C1.CUSTOMER_NAME=D1.CUSTOMER_NAME AND B
1.BRANCH_NAME=D1.BRANCH_NAME
```

OUTPUT

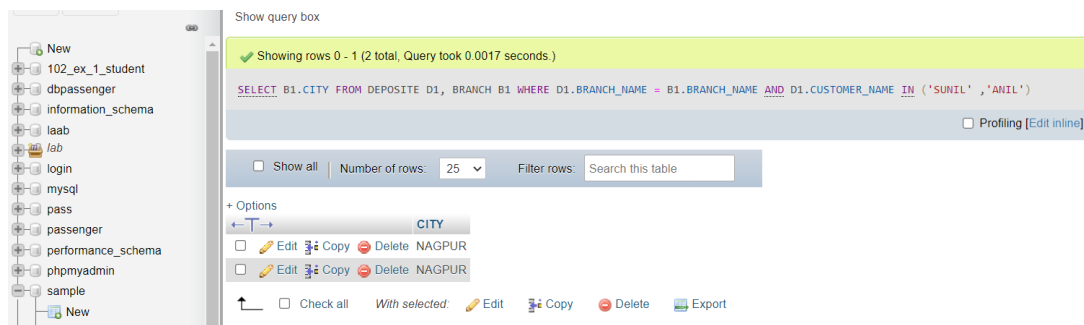


9. Give branch city of Sunil and branch city of Anil

QUERY

```
SELECT B1.CITY FROM DEPOSIT D1, BRANCH B1 WHERE D1.BRANCH_NAME = B1.BRANCH_NAME AND D1.CUSTOMER_NAME IN ('SUNIL', 'ANIL')
```

OUTPUT



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

QUERY

```
SELECT C1.CUSTOMER_NAME, C1.CITY FROM customer C1 WHERE C1.CUSTOMER_NAME IN ('SUNIL', 'ANIL')
```

OUTPUT

