

EXPERIMENT 07: JOIN OR CARTESIAN PRODUCT**1. Give name of customers having living city BOMBAY and branch city NAGPUR****QUERY**

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;

OUTPUT


The screenshot shows a database query interface. On the left is a tree view of the database schema. The main area displays the following SQL query:

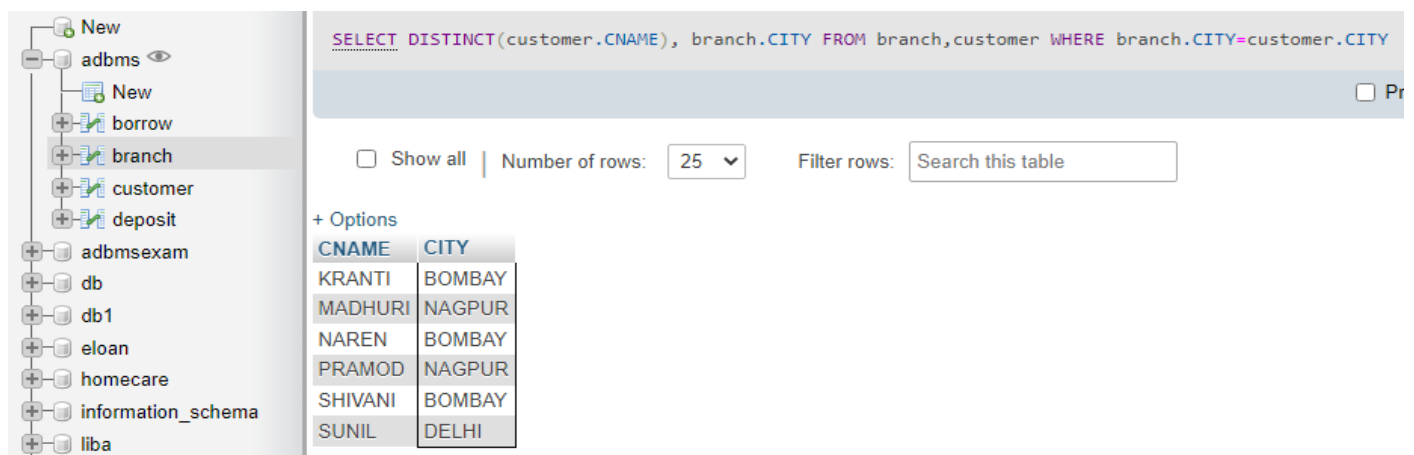
```
SELECT D1.CNAME,D1.BNAME,C1.CNAME,C1.CITY,B1.CITY,B1.BNAME FROM deposit D1,customer C1,branch B1 WHERE C1.CITY='BOMBAY' AND B1.CITY='NAGPUR' AND D1.CNAME=C1.CNAME AND D1.BNAME=B1.BNAME
```

Below the query, there are controls for "Show all", "Number of rows" (set to 25), and "Filter rows" (Search this table). The output is displayed in a table:

CNAME	BNAME	CNAME	CITY	CITY	BNAME
SHIVANI	DHARAMPETH	SHIVANI	BOMBAY	NAGPUR	DHARAMPETH

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

SELECT DISTINCT(customer.CNAME), branch.CITY FROM branch,customer WHERE branch.CITY=customer.CITY;

OUTPUT


The screenshot shows a database query interface. On the left is a tree view of the database schema. The main area displays the following SQL query:

```
SELECT DISTINCT(customer.CNAME), branch.CITY FROM branch,customer WHERE branch.CITY=customer.CITY
```

Below the query, there are controls for "Show all", "Number of rows" (set to 25), and "Filter rows" (Search this table). The output is displayed in a table:

CNAME	CITY
KRANTI	BOMBAY
MADHURI	NAGPUR
NAREN	BOMBAY
PRAMOD	NAGPUR
SHIVANI	BOMBAY
SUNIL	DELHI

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

QUERY

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

OUTPUT

The screenshot shows a database query editor with a tree view on the left containing 'adbm', 'borrow', 'branch', 'customer', 'deposit', 'adbmsexam', 'db', 'db1', 'eloan', and 'homecare'. The main area displays the SQL query: `SELECT C1.CNAME FROM customer C1,deposit D1,borrow B1 WHERE C1.CITY='NAGPUR' AND D1.CNAME=B1.CNAME AND C1.CNAME=B1.CNAME`. Below the query, there are controls for 'Show all', 'Number of rows' (set to 25), and a 'Filter rows' search box. The output table shows two rows: 'MADHURI' and 'PRAMOD'.

CNAME
MADHURI
PRAMOD

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

QUERY

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

OUTPUT

The screenshot shows a database query editor with a tree view on the left. The main area displays the SQL query: `SELECT B1.CNAME,B1.AMOUNT,D1.CNAME,D1.AMOUNT FROM borrow B1,deposit D1 WHERE D1.AMOUNT>1000 AND B1.AMOUNT>2000 AND B1.CNAME=D1.CNAME`. Below the query, there are controls for 'Show all', 'Number of rows' (set to 25), and a 'Filter rows' search box. The output table shows four rows with columns 'CNAME', 'AMOUNT', 'CNAME', and 'AMOUNT'.

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

OUTPUT

The screenshot shows a database management tool interface. On the left is a tree view with nodes: New, adbms, New, borrow, branch, customer, deposit, adbmsexam, db, and db1. The 'deposit' node is selected. The main area displays a SQL query: `SELECT D1.CNAME FROM deposit D1 WHERE D1.BNAME IN(SELECT D2.BNAME FROM deposit D2 WHERE D2.CNAME='SUNIL')`. Below the query, there are controls for 'Show all', 'Number of rows' (set to 25), and 'Filter rows' (a search box). A '+ Options' button is visible. Below the options, a table shows the result: CNAME | SUNIL. The table has columns 'CNAME' and 'SUNIL'.

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

QUERY

SELECT B1.CNAME,B1.AMOUNT FROM borrow B1 WHERE B1.AMOUNT>(SELECT B2.AMOUNT FROM borrow B2 WHERE B2.CNAME='PRAMOD');

OUTPUT

The screenshot shows the same database management tool interface. The 'borrow' node is selected in the tree view. The main area displays a SQL query: `SELECT B1.CNAME,B1.AMOUNT FROM borrow B1 WHERE B1.AMOUNT>(SELECT B2.AMOUNT FROM borrow B2 WHERE B2.CNAME='PRAMOD')`. Below the query, there is a message: 'MySQL returned an empty result set (i.e. zero rows). (Query took 0.0071 seconds.)'. Below this, there are controls for 'Show all', 'Number of rows' (set to 25), and 'Filter rows' (a search box). A '+ Options' button is visible. Below the options, a table shows the result: CNAME | AMOUNT. The table has columns 'CNAME' and 'AMOUNT'.

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

QUERY

SELECT C1.CNAME FROM customer C1 WHERE C1.CITY IN(SELECT B1.CITY FROM branch B1 WHERE B1.BNAME IN (SELECT D1.BNAME FROM deposit D1 WHERE D1.CNAME='SUNIL'));

OUTPUT

The screenshot shows the same database management tool interface. The 'customer' node is selected in the tree view. The main area displays a SQL query: `SELECT C1.CNAME FROM customer C1 WHERE C1.CITY IN(SELECT B1.CITY FROM branch B1 WHERE B1.BNAME IN (SELECT D1.BNAME FROM deposit D1 WHERE D1.CNAME='SUNIL'))`. Below the query, there are controls for 'Show all', 'Number of rows' (set to 25), 'Filter rows' (a search box), and 'Sort by key' (set to None). A '+ Options' button is visible. Below the options, a table shows the result: CNAME | MADHURI, PRAMOD. The table has columns 'CNAME' and 'MADHURI', 'PRAMOD'.

8. Give branch city and living city of Pramod

QUERY

```
SELECT B1.CITY,C1.CITY FROM branch B1, customer C1,deposit D1 WHERE  
C1.CNAME='PRAMOD' AND C1.CNAME=D1.CNAME AND B1.BNAME=D1.BNAME;
```

OUTPUT

The screenshot shows a database interface with a query editor on the left and a results pane on the right. The query editor contains the following SQL query:

```
SELECT B1.CITY,C1.CITY FROM branch B1, customer C1,deposit D1 WHERE C1.CNAME='PRAMOD' AND C1.CNAME=D1.CNAME AND B1.BNAME=D1.BNAME
```

The results pane shows a message: "Showing rows 0 - 0 (1 total, Query took 0.0059 seconds.)". Below the message, there is a table with two columns: CITY and CITY. The table contains one row with the values BANGALORE and NAGPUR.

CITY	CITY
BANGALORE	NAGPUR

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

QUERY

```
SELECT B1.CITY FROM deposit D1,branch B1 WHERE D1.BNAME=B1.BNAME AND  
D1.CNAME IN('SUNIL','ANIL');
```

OUTPUT

The screenshot shows a database interface with a query editor on the left and a results pane on the right. The query editor contains the following SQL query:

```
SELECT B1.CITY FROM deposit D1,branch B1 WHERE D1.BNAME=B1.BNAME AND D1.CNAME IN('SUNIL','ANIL')
```

The results pane shows a message: "Showing rows 0 - 1 (2 total, Query took 0.0043 seconds.)". Below the message, there is a table with one column: CITY. The table contains two rows with the values NAGPUR and NAGPUR.

CITY
NAGPUR
NAGPUR

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

QUERY

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

OUTPUT

The screenshot shows a database interface with a query editor on the left and a results pane on the right. The query editor contains the following SQL query:

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

The results pane shows a message: "Showing rows 0 - 1 (2 total, Query took 0.0043 seconds.)". Below the message, there is a table with two columns: CNAME and CITY. The table contains two rows with the values ANIL and CALCUTTA, and SUNIL and DELHI.

CNAME	CITY
ANIL	CALCUTTA
SUNIL	DELHI