

EXPERIMENT 1:

INSERTION OF VALUES

1. INSERTING VALUES TO BRANCH

```
CREATE TABLE BRANCH (BNAME VARCHAR(20) PRIMARY  
KEY,CITY VARCHAR(30) CHECK (CITY IN  
( 'NAGPUR','DELHI','BANGALORE','BOMBAY')) NOT NULL);
```

```
insert into BRANCH (bname,city)values ('VRCE' , 'NAGPUR');
```

```
insert into BRANCH (bname,city) values ('AJNI' , 'NAGPUR');
```

```
insert into BRANCH (bname,city) values ('KAROLBAGH' ,  
'DELHI');
```

```
insert into BRANCH (bname,city) values ('CHANDNI' , 'DELHI');
```

```
insert into BRANCH (bname,city) values ('DHARAMPETH' ,  
'NAGPUR');
```

```
insert into BRANCH (bname,city) values ('MG ROAD' ,  
'BANGAORE');
```

```
insert into BRANCH (bname,city) values ('ANDHERI' ,  
'BOMBAY');
```

```
insert into BRANCH (bname,city) values ('NEHRU PALACE' ,  
'DELHI');
```

```
insert into BRANCHS(bname,city) values ('POWAI' , 'BOMBAY');
```

```
select * from BRANCH;
```

OUTPUT:



SQL INSERT INTO Statement

MySQL online - Test SQL query

https://extendsclass.com/mysql-online.html

```

10 insert into BRANCHES (cname,city) values ('POWAI' , 'BOMBAY');
11 select * from BRANCHES;
12

```

9 rows

bname	city
AJNI	NAGPUR
ANDHERI	BOMBAY
CHANDNI	DELHI
DHARAMPETH	NAGPUR
KAROLBAGH	DELHI
MIG ROAD	BANGAORE
NEHRU PALACE	DELHI
POWAI	BOMBAY
VRCE	NAGPUR

Altair SDFM for casting, stamping, molding, extrusion, AM, and foaming

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16:22 03-05-2021

2. INSERTING VALUES INTO CUSTOMER TABLE

create table CUSTOMER (CNAME varchar(15),CITY varchar(20)NOT NULL,PRIMARY KEY(CNAME));

insert into CUSTOMER (CNAME,CITY) values ('ANIL' , 'CALCUTTA');

insert into CUSTOMER (CNAME,CITY) values ('SUNIL' , 'DELHI');

insert into CUSTOMER (CNAME,CITY) values ('MEHUL' , 'BARODA');

insert into CUSTOMER (CNAME,CITY) values ('MANDAR' , 'PATNA');

insert into CUSTOMER (CNAME,CITY) values ('MADHURI' , 'NAGPUR');

insert into CUSTOMER (CNAME,CITY) values ('PRAMOD' , 'NAGPUR');

insert into CUSTOMER (CNAME,CITY) values ('SANDIP' , 'SURAT');

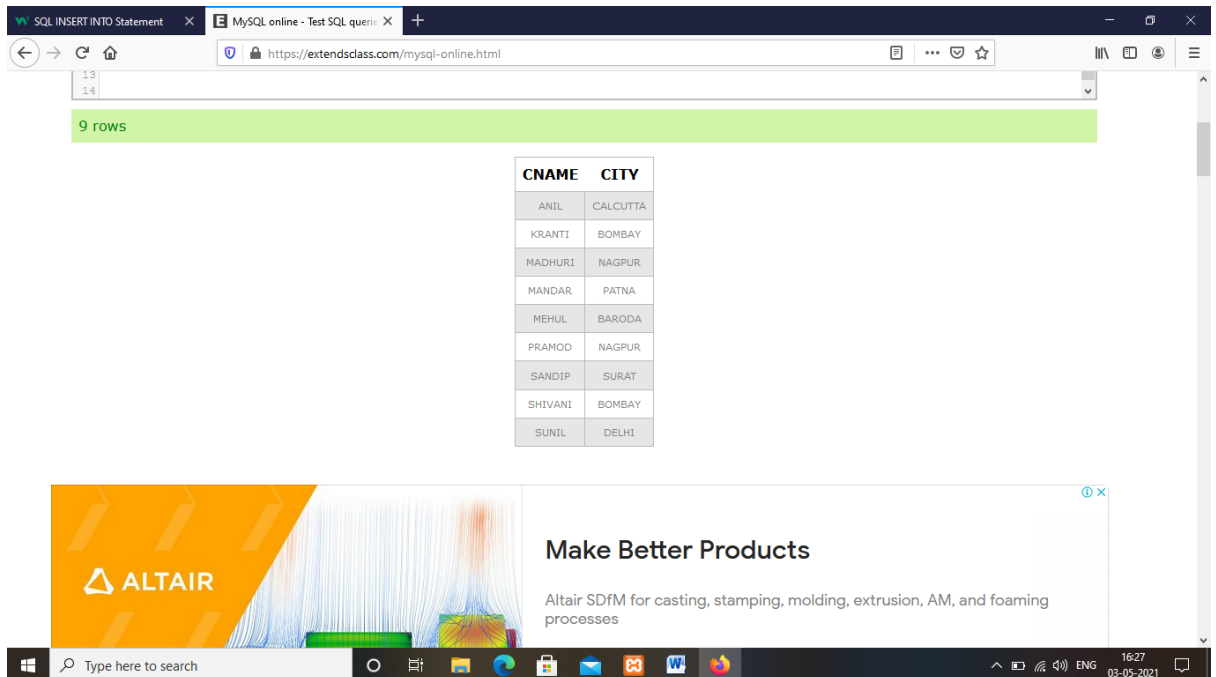
insert into CUSTOMER (CNAME,CITY) values ('SHIVANI' , 'BOMBAY');

insert into CUSTOMER (CNAME,CITY) values ('KRANTI' , 'BOMBAY');

select * from CUSTOMER;



OUTPUT:



The screenshot shows a web browser window with the URL <https://extendsclass.com/mysql-online.html>. The browser displays a table with 9 rows of data. The table has two columns: CNAME and CITY. The data is as follows:

CNAME	CITY
ANIL	CALCUTTA
KRANTI	BOMBAY
MADHURI	NAGPUR
MANDAR	PATNA
MEHUL	BARODA
PRAMOD	NAGPUR
SANDIP	SURAT
SHIVANI	BOMBAY
SUNIL	DELHI

Below the table, there is an advertisement for Altair SDFM, which includes the text "Make Better Products" and "Altair SDFM for casting, stamping, molding, extrusion, AM, and foaming processes".

3. INSERTING VALUES INTO DEPOSITE TABLE

CREATE TABLE DEPOSIT (ACTNO VARCHAR(5) CHECK (ACTNO LIKE 'D%') PRIMARY KEY ,CNAME VARCHAR(15) REFERENCES CUSTOMER(CNAME) ,BNAME VARCHAR(20) REFERENCES BRANCH(BNAME),AMOUNT FLOAT(8) CHECK (AMOUNT>0) NOT NULL, ADATE DATE);

insert into DEPOSITE (ACTNO,CNAME,BNAME,AMOUNT,ADATE)
values ('D100' , 'ANIL' , 'VRCE' , '1000.00' , '1-MAR-95');

insert into DEPOSITE (ACTNO,CNAME,BNAME,AMOUNT,ADATE)
values ('D101' , 'SUNIL' , 'ANJNI' , '500.00' , '4-JAN-96');

insert into DEPOSITE (ACTNO,CNAME,BNAME,AMOUNT,ADATE)
values ('D102' , 'MEHUL' , 'KAROLBAGH' , '3500.00' , '17-NOV-95');

insert into DEPOSITE (ACTNO,CNAME,BNAME,AMOUNT,ADATE)
values ('D103' , 'MADHURI' , 'CHANDNI' , '1200.00' , '17-DEC-95');



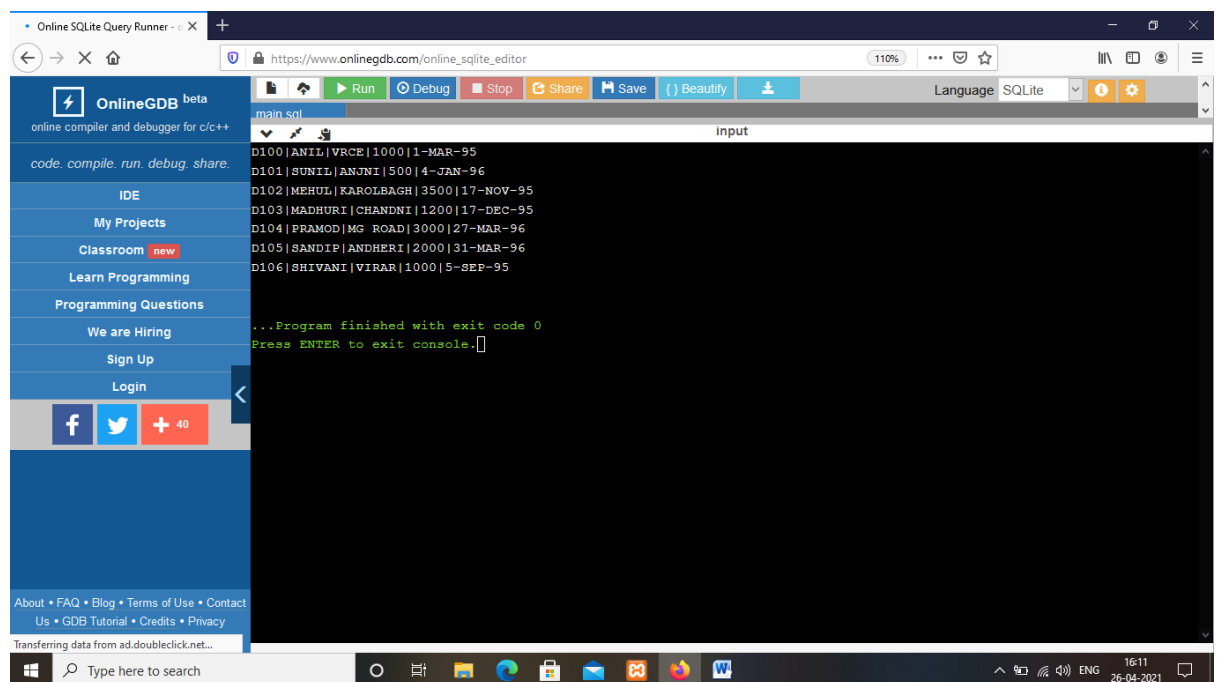
insert into DEPOSITE (ACTNO,CNAME,BNAME,AMOUNT,ADATE)
values ('D104' , 'PRAMOD' , 'MG ROAD' , '3000.00' , '27-MAR-96');

insert into DEPOSITE (ACTNO,CNAME,BNAME,AMOUNT,ADATE)
values ('D105' , 'SANDIP' , 'ANDHERI' , '2000.00' , '31-MAR-96');

insert into DEPOSITE (ACTNO,CNAME,BNAME,AMOUNT,ADATE)
values ('D106' , 'SHIVANI' , 'VIRAR' , '1000.00' , '5-SEP-95');

select * from DEPOSITE;

OUTPUT:



The screenshot shows the OnlineGDB SQLite Query Runner interface. The left sidebar contains navigation links: IDE, My Projects, Classroom (new), Learn Programming, Programming Questions, We are Hiring, Sign Up, and Login. The main area displays the output of a query, showing a table with 6 rows and 5 columns. The data is as follows:

ACTNO	CNAME	BNAME	AMOUNT	ADATE
D100	ANIL	VRCE	1000	1-MAR-95
D101	SUNIL	ANJNI	500	4-JAN-96
D102	MEHUL	KAROLBAGH	3500	17-NOV-95
D103	MADHURI	CHANDNI	1200	17-DEC-95
D104	PRAMOD	MG ROAD	3000	27-MAR-96
D105	SANDIP	ANDHERI	2000	31-MAR-96
D106	SHIVANI	VIRAR	1000	5-SEP-95

Below the table, the console shows the message: "...Program finished with exit code 0" and "Press ENTER to exit console." The bottom of the window shows a Windows taskbar with the date 26-04-2021 and time 16:11.

4. INSERTING VALUES INTO BORROW TABLE

CREATE TABLE BORROW (LOANNO VARCHAR(8) CHECK
(LOANNO LIKE 'L%') PRIMARY KEY,CNAME VARCHAR(15)
REFERENCES CUSTOMER(CNAME) ,BNAME VARCHAR(20)

REFERENCES BRANCH(BNAME),AMOUNT FLOAT(8) CHECK
(AMOUNT>0) NOT NULL);

insert into BORROW (LOANNO,CNAME,BNAME,AMOUNT) values
('L201' , 'ANIL' , 'VRCE' , '1000.00');

insert into BORROW (LOANNO,CNAME,BNAME,AMOUNT) values
('L202' , 'SUNIL' , 'ANJNI' , '500.00');

insert into BORROW (LOANNO,CNAME,BNAME,AMOUNT) values
('L203' , 'MEHUL' , 'KAROLBAGH' , '3500.00');

insert into BORROW (ACTNO,CNAME,BNAME,AMOUNT) values
('L204' , 'MADHURI' , 'CHANDNI' , '1200.00');

insert into BORROW (ACTNO,CNAME,BNAME,AMOUNT) values
('L205' , 'PRAMOD' , 'MG ROAD' , '3000.00');

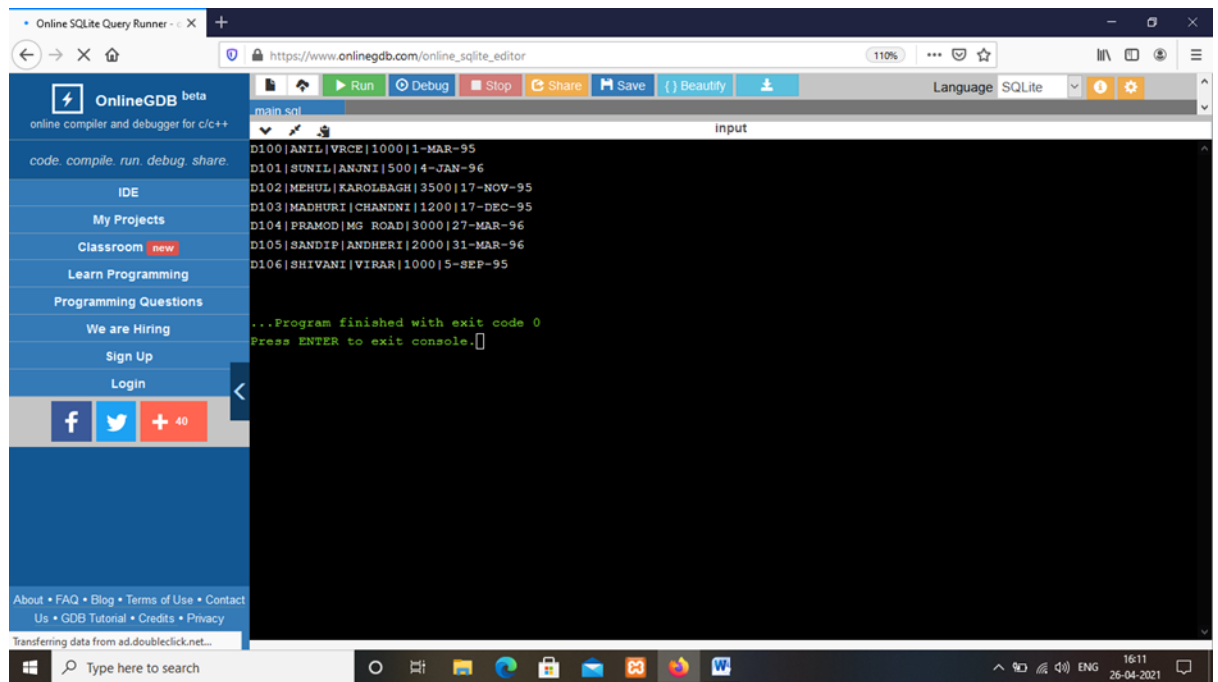
insert into BORROW (ACTNO,CNAME,BNAME,AMOUNT) values
('L206' , 'SANDIP' , 'ANDHERI' , '2000.00');

insert into BORROW (ACTNO,CNAME,BNAME,AMOUNT) values
('L207' , 'SHIVANI' , 'VIRAR' , '1000.00');

select * from BORROW;

OUTPUT:





EXPERIMENT:2

SELECTING DATA FROM SINGLE TABLE

1. List all data from table deposit

```
SELECT*FROM DEPOSIT;
```

2. List all data from borrow

```
SELECT*FROM BORROW;
```

3. List all data from customer



SELECT*FROM CUSTOMER;

4. List all data from branch

SELECT*FROM BRANCH;

5. Give account no and amount no.of deposit

SELECT ACTNO, AMOUNT FROM DEPOSIT;

6. Give customer name and account no of depositors

SELECT CNAME,ACTNO FROM DEPOSIT;

7. Give name of customers

SELECT CNAME FROM CUSTOMER;

8. Give name of branches



SELECT BNAME FROM BRANCH;

9. Give name of borrow

SELECT CNAME FROM BORROW;

10. Give names of customer living in city Nagpur

SELECT CNAME FROM CUSTOMER WHERE
CITY='NAGPUR';

11. Give names of depositors having amount greater than 4000

select CNAME from DEPOSIT where AMOUNT>4000;

12. Give account date of Anil

SELECT ADATE FROM DEPOSIT where CNAME='ANIL';

13. Give name of all branches located in Bombay



`select BNAME from BRANCH where CITY='Bombay';`

- 14. Give name of borrower having loan number 1205**

`select * from BORROW;`

`select CNAME from BORROW where LOANNO='L205';`

- 15. Give names of depositors having account at VRCE**

`select CNAME from DEPOSIT WHERE BNAME='VRCE';`

- 16. Give names of all branched located in city Delhi**

`select BNAME from BRANCH WHERE CITY='Delhi';`

- 17. Give name of the customers who opened account date '1-12-96'**



```
select CNAME from DEPOSIT WHERE ADATE='1996-12-1';
```

18. Give account no and deposit amount of customers having account opened between dates '1-12-96' and '1-5-96'

```
select ACTNO,AMOUNT from DEPOSIT WHERE ADATE BETWEEN '1996-12-1' AND '1996-05-1';
```

19. Give name of the city where branch KAROLBAGH is located

```
select CITY from BRANCH where BNAME='KAROLBAGH' ;
```

20. Give details of customer ANIL

```
select * from customer join borrow on  
customer.cname=borrow.cname join deposit on  
deposit.cname=borrow.cname where  
customer.cname='ANIL';
```



EXPERIMENT NO: 3

DDL COMMANDS AND CONSTRAINTS

1. Create a table emp with attributes empno number(4) as primary key ,ename char(10),hiredate,salary,commission

```
CREATE TABLE emp(empno varchar(4) ,ename varchar(10),  
hiredate date,salary float(8),commission float (8),primary key  
(empno));
```

INSERT 5 ROWS OF DATA

```
insert into emp (empno,ename,hiredate,salary,commission)  
values (101 , 'Ramesh' , '17-jan-1980' , '5000.0' );
```

```
insert into emp (empno,ename,hiredate,salary,commission)  
values (102 , 'Ajay' , '05-jul-1985' , '5000.0' , '500');
```

```
insert into emp (empno,ename,hiredate,salary,commission)  
values (103 , 'Ravi' , '12-Aug-1981' , '1500.0');
```

```
insert into emp (empno,ename,hiredate,salary,commission)  
values (104 , 'Nikesh' , '03-mar-1983' , '3000.0' , '700');
```

```
insert into emp (empno,ename,hiredate,salary,commission)  
values (105 , 'Ravi' , '05-jul-1985' , '3000.0' );
```

2. Modifying the structure of tables



A. Add new columns: sal number(7,2)

```
ALTER TABLE emp ADD sal number(7,2);
```

B. Dropping a column from a table :sal

```
ALTER TABLE emp DROP COLUMN sal;
```

C. Modifying existing column: ename varchar2(15)

```
ALTER TABLE emp MODIFY ename varchar2(15);
```

D. Renaming the tables: emp to emp1

```
RENAME emp TO emp1;
```

E. Truncating the tables : emp1

```
TRUNCATE TABLE emp1;
```

F. Destroying tables :emp

```
DELETE * FROM emp;
```



3. Create a table stud with sname varchar2(20) primary key, rollno number(10) not null, dob date not null

```
CREATE TABLE stud(sname varchar(20) ,rollno  
number(10) not null, dob date not null,primary key  
(sname));
```

4. Create a table student as regno number (6),mark number (3) check constraint (mark>=0 and mark<=100) in table student add check constraints(length(regno <=4))

```
CREATE TABLE student(regno number(6),mark  
number(3) CHECK (mark >=0 and mark <=100) ADD  
CHECK (length(regno <=4)));
```

5. Create a table cust with (custid number(6) constaint unique,name char(10)

```
CREATE TABLE cust (custid number(6),name  
varchar(10));
```

EXPERIMENT NO : 4



DATE,NUMBER AN 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****

```
SELECT CONTACT_WS(CUSTOMER_NAME,"****",  
"####" , "****") from Customer;
```

EXPERIMENT NO: 5

AGGREGATE FUNCTIONS

1. List total loan

```
SELECT SUM (AMOUNT) from borrow;
```

2. List total deposit



SELECT SUM (AMOUNT) from deposit;

3. List total loan taken from KAROLBAGH branch

SELECT SUM (AMOUNT) from borrow WHERE
BRANCH_NAME='KAROLBAGH';

4. List total deposit of ccustomers having account date later than 1-jan-96

SELECT SUM(AMOUNT) from deposit WHERE
ACC_DATE>'1996-01-01';

5. List total deposit of customers living in city NAGPUR

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

6. List maximum deposit of customer living in Bombay



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

7. List total deposit of customer having branch in BOMBAY

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

8. Count total number of branch cities

```
SELECT COUNT (DISTINCT CITY) from branch;
```

9. Count total number of customers cities

```
SELECT COUNT (DISTINCT CITY) from customer;
```

10. Give branch names and branch wise deposit

```
SELECT BRANCH_NAME,SUM(AMOUNT) from deposit  
GROUP BY BRANCH_NAME;
```



11. Give city wise name and branch wise deposit

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

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

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

13. Count total number of customers

```
SELECT COUNT (CUSTOMER_NAME) from customer;
```

14. Count total number of depositors branch wise

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



15. Give maximum loan from branch VRCE

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

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

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

EXPERIMENT NO: 6

SET OPERATIONS

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

```
SELECT CUSTOMER_NAME FROM deposit EXCEPT  
SELECT CUSTOMER_NAME FROM BORROW;
```

2. List all the customers who are both depositors and



borrowers

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

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

```
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');
```

- 4. List all the depositors living in city NAGPUR**

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

- 5. List all the depositors having deposit in all the branches where sunil is having Account**

```
SELECT D1.CUSTOMER_NAME FROM deposit D1 WHERE  
D1.BRANCH_NAME IN (SELECT D2.BRANCH_NAME FROM
```



deposit D2 WHERE D2.CUSTOMER_NAME='SUNIL');

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

```
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’);
```

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

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

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

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





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