EXPERIMENT 1:

CREATE TABLE CUSTOMER (CNAME VARCHAR(15) PRIMARY KEY ,CITY VARCHAR(20) NOT NULL);

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

CREATE TABLE BORROW (LOANNO VARCHAR(8) PRIMARY KEY CHECK (LOANNO LIKE 'L%') ,CNAME VARCHAR(15),BNAME VARCHAR(20) ,AMOUNT FLOAT(8,2) NOT NULL CHECK (AMOUNT>0) , FOREIGN KEY (CNAME) REFERENCES CUSTOMER(CNAME), FOREIGN KEY (BNAME) REFERENCES BRANCH(BNAME));

CREATE TABLE DEPOSIT (ACTNO VARCHAR(5) PRIMARY KEY CHECK (ACTNO LIKE 'D%'),CNAME VARCHAR(15),BNAME VARCHAR(20) ,AMOUNT FLOAT(8,2) NOT NULL CHECK (AMOUNT>0), ADATE DATE ,FOREIGN KEY (CNAME) REFERENCES CUSTOMER(CNAME), FOREIGN KEY (BNAME) REFERENCES BRANCH(BNAME));

INSERT INTO CUSTOMER VALUES('ANIL','CALCUTTA');
INSERT INTO CUSTOMER VALUES('SUNIL','DELHI');
INSERT INTO CUSTOMER VALUES('MEHUL','BARODA');
INSERT INTO CUSTOMER VALUES('MANDAR','PATNA');
INSERT INTO CUSTOMER VALUES('MADHURI','NAGPUR');
INSERT INTO CUSTOMER VALUES('PRAMOD','NAGPUR');
INSERT INTO CUSTOMER VALUES('SANDIP','SURAT');
INSERT INTO CUSTOMER VALUES('SHIVANI','BOMBAY');
INSERT INTO CUSTOMER VALUES('KRANTI','BOMBAY');
INSERT INTO CUSTOMER VALUES('NAREN','BOMBAY');

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','BANGALORE');
INSERT INTO BRANCH(BNAME,CITY) VALUES ('ANDHERI','BOMBAY');
INSERT INTO BRANCH(BNAME,CITY) VALUES ('NEHRU-PALACE','DELHI');
INSERT INTO BRANCH(BNAME,CITY) VALUES ('POWAI','BOMBAY');

INSERT INTO BORROW VALUES ('L201', 'ANIL','VRCE','1000.00');
INSERT INTO BORROW VALUES ('L206',' MEHUL','AJNI',' 5000.00');
INSERT INTO BORROW VALUES ('L311','SUNIL','DHARAMPETH','3000.00');
INSERT INTO BORROW VALUES ('L321','MADHURI','ANDHERI','2000.00');
INSERT INTO BORROW VALUES ('L371','PRAMOD','VIRAR','8000.00');
INSERT INTO BORROW VALUES ('L481',' KRANTI','NEHRU-PLACE','3000.00');

INSERT INTO DEPOSIT VALUES ('D100','ANIL','VRCE',1000.00,'1995-03-01');
INSERT INTO DEPOSIT VALUES ('D101','SUNIL','AJNI',500.00,'1996-01-04');
INSERT INTO DEPOSIT VALUES ('D102','MEHUL','KAROLBAGH',3500.00,'1995-11-17');
INSERT INTO DEPOSIT VALUES ('D104',' MADHURI','CHANDNI',1200.00,'1995-12-17');
INSERT INTO DEPOSIT VALUES ('D105','PRAMOD','MG-ROAD',3000.00,'1996-03-27');
INSERT INTO DEPOSIT VALUES ('D106','SANDIP','ANDHERI',2000.00,'1996-03-31');
INSERT INTO DEPOSIT VALUES ('D107','SHIVANI','VIRAR',1000.00,'1995-09-05');
INSERT INTO DEPOSIT VALUES ('D108','KRANTI','NEHRU-PLACE 50',5000.00,'1995-07-05');
INSERT INTO DEPOSIT VALUES ('D109',' MINU','WAI',7000.00,'1995-08-01');

EXPERIMENT 2:

1.   List all data from table deposite

```
mysql> SELECT * FROM dEPOSIT;
+-------+---------+--------------+---------+------------+
| ACTNO | CNAME   | BNAME        | AMOUNT  | ADATE      |
+-------+---------+--------------+---------+------------+
| D100  | ANIL    | VRCE         | 1000.00 | 1995-03-01 |
| D101  | SUNIL   | AJNI         |  500.00 | 1996-01-04 |
| D102  | MEHUL   | KAROLBAGH    | 3500.00 | 1995-11-17 |
| D104  | MADHURI | CHANDNI      | 1200.00 | 1995-12-17 |
| D105  | PRAMOD  | MG-ROAD      | 3000.00 | 1996-03-27 |
| D106  | SANDIP  | ANDHERI      | 2000.00 | 1996-03-31 |
| D107  | SHIVANI | VIRAR        | 1000.00 | 1995-09-05 |
| D108  | KRANTI  | NEHRU-PALACE | 5000.00 | 1995-07-05 |
| D109  | MINU    | WAI          | 7000.00 | 1995-08-01 |
+-------+---------+--------------+---------+------------+
9 rows in set (0.00 sec)
```

2. List all data from borrow

```
mysql> SELECT * FROM BORROW;
+--------+---------+-------------+---------+
| LOANNO | CNAME   | BNAME       | AMOUNT  |
+--------+---------+-------------+---------+
| L201   | ANIL    | VRCE        | 1000.00 |
| L206   | MEHUL   | AJNI        | 5000.00 |
| L311   | SUNIL   | DHARAMPETH  | 3000.00 |
| L321   | MADHURI | ANDHERI     | 2000.00 |
| L371   | PRAMOD  | VIRAR       | 8000.00 |
| L481   | KRANTI  | NEHRU-PALACE | 3000.00 |
+--------+---------+-------------+---------+
6 rows in set (0.00 sec)
```

3. List all data from customer

```
mysql> SELECT * FROM CUSTOMER
    -> ;
+---------+----------+
| CNAME   | CITY     |
+---------+----------+
| ANIL    | CALCUTTA |
| KRANTI  | BOMBAY   |
| MADHURI | NAGPUR   |
| MANDAR  | PATNA    |
| MEHUL   | BARODA   |
| NAREN   | BOMBAY   |
| PRAMOD  | NAGPUR   |
| SANDIP  | SURAT    |
| SHIVANI | BOMBAY   |
| SUNIL   | DELHI    |
+---------+----------+
10 rows in set (0.00 sec)
```

4. List all data from branch

```
mysql> SELECT * FROM BRANCH;
+--------------+-----------+
| BNAME        | CITY      |
+--------------+-----------+
| AJNI         | NAGPUR    |
| ANDHERI      | BOMBAY    |
| CHANDNI      | DELHI     |
| DHARAMPETH   | NAGPUR    |
| KAROLBAGH    | DELHI     |
| MG-ROAD      | BANGALORE |
| NEHRU-PALACE | DELHI     |
| POWAI        | BOMBAY    |
| VRCE         | NAGPUR    |
+--------------+-----------+
9 rows in set (0.00 sec)
```

5. Give account no and amount of deposite

```
mysql> SELECT ACTNO,AMOUNT FROM DEPOSIT;
+-------+---------+
| ACTNO | AMOUNT  |
+-------+---------+
| D100  | 1000.00 |
| D101  |  500.00 |
| D102  | 3500.00 |
| D104  | 1200.00 |
| D105  | 3000.00 |
| D106  | 2000.00 |
| D107  | 1000.00 |
| D108  | 5000.00 |
| D109  | 7000.00 |
+-------+---------+
9 rows in set (0.00 sec)
```

6. Give customer name and account no of depositors

```
mysql> SELECT CNAME,ACTNO FROM DEPOSIT;
+---------+-------+
| CNAME   | ACTNO |
+---------+-------+
| ANIL    | D100  |
| KRANTI  | D108  |
| MADHURI | D104  |
| MEHUL   | D102  |
| MINU    | D109  |
| PRAMOD  | D105  |
| SANDIP  | D106  |
| SHIVANI | D107  |
| SUNIL   | D101  |
+---------+-------+
9 rows in set (0.00 sec)
```

7. Give name of customers

```
mysql> SELECT CNAME FROM CUSTOMER;
+---------+
| CNAME   |
+---------+
| ANIL    |
| KRANTI  |
| MADHURI |
| MANDAR  |
| MEHUL   |
| NAREN   |
| PRAMOD  |
| SANDIP  |
| SHIVANI |
| SUNIL   |
+---------+
10 rows in set (0.00 sec)
```

8. Give name of branches

```
mysql> SELECT BNAME FROM BRANCH;
+--------------+
| BNAME        |
+--------------+
| AJNI         |
| ANDHERI      |
| CHANDNI      |
| DHARAMPETH   |
| KAROLBAGH    |
| MG-ROAD      |
| NEHRU-PALACE |
| POWAI        |
| VRCE         |
+--------------+
9 rows in set (0.00 sec)
```

9. Give name of borrows

```
mysql> SELECT CNAME FROM BORROW;
+---------+
| CNAME   |
+---------+
|  PRAMOD |
| ANIL    |
| KRANTI  |
| MADHURI |
| MEHUL   |
| SUNIL   |
+---------+
6 rows in set (0.00 sec)
```

10. Give names of customer living in city Nagpur

```
mysql> SELECT CNAME FROM CUSTOMER WHERE CITY='NAGPUR';
+---------+
| CNAME   |
+---------+
| MADHURI |
| PRAMOD  |
+---------+
2 rows in set (0.00 sec)
```

11. Give names of depositors having amount greater than 4000

```
mysql> SELECT CNAME FROM DEPOSIT WHERE AMOUNT > 4000;
+--------+
| CNAME  |
+--------+
| KRANTI |
| MINU   |
+--------+
2 rows in set (0.00 sec)
```

12. Give account date of Anil

```
mysql> SELECT ADATE FROM DEPOSIT WHERE CNAME='ANIL';
+------------+
| ADATE      |
+------------+
| 1995-03-01 |
+------------+
1 row in set (0.00 sec)
```

13. Give name of all branches located in Bombay

```
mysql> SELECT BNAME FROM BRANCH WHERE CITY='BOMBAY';
+---------+
| BNAME   |
+---------+
| ANDHERI |
| POWAI   |
+---------+
2 rows in set (0.00 sec)
```

14. Give name of borrower having loan number l205

```
mysql> SELECT CNAME FROM BORROW WHERE LOANNO='L205';
Empty set (0.00 sec)
```

15. Give names of depositors having account at VRCE

```
mysql> SELECT CNAME FROM DEPOSIT WHERE BNAME='VRCE';
+-------+
| CNAME |
+-------+
| ANIL  |
+-------+
1 row in set (0.00 sec)
```

16. Give names of all branched located in city Delhi

```
mysql> SELECT BNAME FROM BRANCH WHERE CITY='DELHI';
+--------------+
| BNAME        |
+--------------+
| CHANDNI      |
| KAROLBAGH    |
| NEHRU-PALACE |
+--------------+
3 rows in set (0.00 sec)
```

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

```
mysql> SELECT CNAME FROM DEPOSIT WHERE ADATE='1996-12-01';
Empty set (0.00 sec)
```

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

```
mysql> SELECT ACTNO,AMOUNT FROM DEPOSIT WHERE ADATE >='1996-05-01'  AND ADATE <='1996-12-01';
Empty set (0.00 sec)
```

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

```
mysql> SELECT CITY FROM BRANCH WHERE BNAME='KAROLBAGH';
+-------+
| CITY  |
+-------+
| DELHI |
+-------+
1 row in set (0.00 sec)
```

20.   Give details of customer ANIL

```
mysql> SELECT D.ACTNO,D.CNAME,D.BNAME,D.AMOUNT,B.LOANNO,B.AMOUNT FROM DEPOSIT D,BORROW B WHERE B.CNAME='ANIL' AND D.CNAME=B.CNAME;
+-------+-------+-------+---------+--------+---------+
| ACTNO | CNAME | BNAME | AMOUNT  | LOANNO | AMOUNT  |
+-------+-------+-------+---------+--------+---------+
| D100  | ANIL  | VRCE  | 1000.00 | L201   | 1000.00 |
+-------+-------+-------+---------+--------+---------+
1 row in set (0.00 sec)
```

EXPERIMENT 3:

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

insert 5 rows of data

101   Ramesh   17-Jan-1980 5000   ;

102   Ajay   05-Jul-1985 5000 500;

103   Ravi   12-Aug-1981   1500 ;

104   Nikesh   03-Mar-1983   3000 700;

105   Ravi   05-jul-1985 3000;

```
mysql> select * from EMP;
+-------+--------+------------+--------+------+
| EMPNO | ENAME  | HIREDATE   | SALARY | COMM |
+-------+--------+------------+--------+------+
|   101 | RAMESH | 1980-01-17 |   5000 | NULL |
|   102 | AJAY   | 1985-07-05 |   5000 |  500 |
|   103 | RAVI   | 1981-08-12 |   1500 | NULL |
|   104 | NIKESH | 1983-03-03 |   3000 |  700 |
|   105 | RAVI   | 1985-07-05 |   3000 | NULL |
+-------+--------+------------+--------+------+
5 rows in set (0.00 sec)
```

2.Modifying the structure of tables

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

```
mysql> ALTER TABLE EMP ADD SAL INTEGER(7);
Query OK, 5 rows affected (0.26 sec)
Records: 5  Duplicates: 0  Warnings: 0

mysql> select * from EMP;
+-------+--------+------------+--------+------+------+
| EMPNO | ENAME  | HIREDATE   | SALARY | COMM | SAL  |
+-------+--------+------------+--------+------+------+
|   101 | RAMESH | 1980-01-17 |   5000 | NULL | NULL |
|   102 | AJAY   | 1985-07-05 |   5000 |  500 | NULL |
|   103 | RAVI   | 1981-08-12 |   1500 | NULL | NULL |
|   104 | NIKESH | 1983-03-03 |   3000 |  700 | NULL |
|   105 | RAVI   | 1985-07-05 |   3000 | NULL | NULL |
+-------+--------+------------+--------+------+------+
5 rows in set (0.00 sec)
```

b.Dropping a column from a table: sal

```
mysql> ALTER TABLE EMP DROP SAL;
Query OK, 5 rows affected (0.26 sec)
Records: 5  Duplicates: 0  Warnings: 0

mysql> select * from EMP;
+-------+--------+------------+--------+------+
| EMPNO | ENAME  | HIREDATE   | SALARY | COMM |
+-------+--------+------------+--------+------+
|   101 | RAMESH | 1980-01-17 |   5000 | NULL |
|   102 | AJAY   | 1985-07-05 |   5000 |  500 |
|   103 | RAVI   | 1981-08-12 |   1500 | NULL |
|   104 | NIKESH | 1983-03-03 |   3000 |  700 |
|   105 | RAVI   | 1985-07-05 |   3000 | NULL |
+-------+--------+------------+--------+------+
5 rows in set (0.00 sec)
```

c.Modifying existing column :ename varchar2(15)

```
mysql> ALTER TABLE EMP MODIFY ENAME VARCHAR(10);
Query OK, 5 rows affected (0.31 sec)
Records: 5  Duplicates: 0  Warnings: 0

mysql> select * from EMP;
+-------+--------+------------+--------+------+
| EMPNO | ENAME  | HIREDATE   | SALARY | COMM |
+-------+--------+------------+--------+------+
|   101 | RAMESH | 1980-01-17 |   5000 | NULL |
|   102 | AJAY   | 1985-07-05 |   5000 |  500 |
|   103 | RAVI   | 1981-08-12 |   1500 | NULL |
|   104 | NIKESH | 1983-03-03 |   3000 |  700 |
|   105 | RAVI   | 1985-07-05 |   3000 | NULL |
+-------+--------+------------+--------+------+
5 rows in set (0.00 sec)
```

d.Renaming the tables: emp to emp1

```
mysql> ALTER TABLE EMP RENAME TO EMP1;
Query OK, 0 rows affected (0.05 sec)

mysql> select * from EMP;
ERROR 1146 (42S02): Table 'bank1.emp' doesn't exist
mysql> select * from EMP1;
+-------+--------+------------+--------+------+
| EMPNO | ENAME  | HIREDATE   | SALARY | COMM |
+-------+--------+------------+--------+------+
|   101 | RAMESH | 1980-01-17 |   5000 | NULL |
|   102 | AJAY   | 1985-07-05 |   5000 |  500 |
|   103 | RAVI   | 1981-08-12 |   1500 | NULL |
|   104 | NIKESH | 1983-03-03 |   3000 |  700 |
|   105 | RAVI   | 1985-07-05 |   3000 | NULL |
+-------+--------+------------+--------+------+
5 rows in set (0.00 sec)
```

e.truncating the tables:emp1

```
mysql> TRUNCATE TABLE EMP1;
Query OK, 0 rows affected (0.12 sec)

mysql> select * from EMP1;
Empty set (0.00 sec)
```

f.Destroying tables:emp

```
mysql> drop table EMP1;
Query OK, 0 rows affected (0.06 sec)

mysql> select * from EMP1;
ERROR 1146 (42S02): Table 'bank1.emp1' doesn't exist
mysql>
```