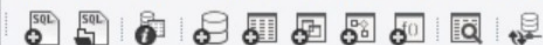


```
1 • create database banking_enterprise;
2 • use banking_enterprise;
3 • create table branch(branch_name varchar(30) primary key,branch_city varchar(30),assets real);
4 • create table accounts(accno int primary key,branch_name varchar(30),balance real,
5 • foreign key (branch_name) references branch(branch_name)on delete cascade on update cascade);
6 • create table customer(customer_name varchar(30) primary key,customer_street varchar(20),customer_city varchar(20));
7 • create table depositor(customer_name varchar(30),accno int,primary key(customer_name ,accno),
8 • foreign key (accno) references accounts(accno)on delete cascade on update cascade,
9 • foreign key (customer_name) references customer(customer_name)on delete cascade on update cascade);
10 • create table loan(loan_number int primary key,branch_name varchar(30),amount real,foreign key (branch_name) references branch(branch_name));
11 • create table borrower (customer_name varchar(30),loan_number int,primary key(customer_name, loan_number),
12 • foreign key (customer_name) references customer(customer_name)on delete cascade on update cascade,
13 • foreign key (loan_number) references loan(loan_number)on delete cascade on update cascade);
14 • show tables;
15
16 • insert into branch values('SBI PD NAGAR','BANGALORE', 200000);
17 • insert into branch values('SBI RAJAJI NAGAR','BANGALORE', 500000);
18 • insert into branch values('SBI JAYANAGAR','DELHI', 660000);
19 • insert into branch values('SBI VIJAY NAGAR','CHENNAI', 870000);
20 • insert into branch values('SBI HOSAKEREHALLI','CHENNAI', 550000);
21 • commit;
22 • select *from branch;
23
24 • insert into accounts values(1001, 'SBI PD NAGAR',15000);
```



Limit to 1000 rows

```
22 • select *from branch;
23
24 • insert into accounts values(1001, 'SBI PD NAGAR',15000);
25 • insert into accounts values(1002, 'SBI RAJAJI NAGAR',25000);
26 • insert into accounts values(1003, 'SBI JAYANAGAR',500);
27 • insert into accounts values(1004, 'SBI VIJAY NAGAR',10000);
28 • insert into accounts values(1005, 'SBI VIJAY NAGAR',40000);
29 • commit;
30 • select *from accounts;
31
32 • insert into customer values('KEZAR','M G ROAD','BANGALORE');
33 • insert into customer values('LAL KRISHNA', 'ST MKS ROAD','DELHI');
34 • insert into customer values('RAHUL','AUGSTEN ROAD','CHENNAI');
35 • insert into customer values('FAIZAL','RESEDECY ROAD','BANGALORE');
36 • insert into customer values('RAJEEV','DICKNSN ROAD','CHENNAI');
37 • commit;
38 • select *from customer;
39
40 • insert into depositor values('KEZAR',1001);
41 • insert into depositor values('KEZAR',1002);
42 • insert into depositor values('LAL KRISHNA',1003);
43 • insert into depositor values('RAHUL',1004);
44 • insert into depositor values('RAHUL',1005);
45 • commit;
```





Limit to 1000 rows

```
43 • insert into depositor values('RAHUL',1004);
44 • insert into depositor values('RAHUL',1005);
45 • commit;
46 • select *from depositor;
47
48 • insert into loan values(10011 , 'SBI PD NAGAR',10000);
49 • insert into loan values(10012, 'SBI RAJAJI NAGAR',5000);
50 • insert into loan values(10013, 'SBI RAJAJI NAGAR',20000);
51 • insert into loan values(10014, 'SBI JAYANAGAR',15000);
52 • insert into loan values(10015, 'SBI HOSAKEREHALLI',25000);
53 • commit;
54 • select *from loan;
55
56 • insert into borrower values('FAIZAL', 10011);
57 • insert into borrower values('KEZAR', 10012);
58 • insert into borrower values('FAIZAL', 10013);
59 • insert into borrower values('LAL KRISHNA', 10014);
60 • insert into borrower values('RAJEEV', 10015);
61 • commit;
62 • select *from borrower;
63
64 /*1*/
65 • select customer_name from depositor d, accounts a where d.accno=a.accno and a.branch_name="SBI VIJAY NAGAR" group by d.customer_name having count(d.customer_name) >= 2;
66
```





Limit to 1000 rows

```
61 • commit;
62 • select *from borrower;
63
64 /*1*/
65 • select customer_name from depositor d, accounts a where d.accno=a.accno and a.branch_name="SBI VIJAY NAGAR" group by d.customer_name having count(d.customer_name) >= 2;
66
67 /*2*/
68 • select d.customer_name from accounts a, branch b, depositor d where b.branch_name=a.branch_name and a.accno=d.accno and b.branch_city="BANGALORE"
69 group by d.customer_name having count(distinct b.branch_name)=(select count(branch_name) from branch where branch_city="BANGALORE");
70
71 /*3*/
72 • delete from accounts where branch_name in(select branch_name from branch where branch_city="BANGALORE");
73 • select *from accounts;
74
75 /*4*/
76 • alter table accounts add (account_type varchar(20));
77
78 /*5*/
79 • select c.customer_name,c.customer_street,c.customer_city,l.branch_name,b.loan_number,l.amount
80 from customer c join borrower b on c.customer_name=b.customer_name
81 join loan l on l.loan_number=b.loan_number where l.amount>20000;
82
83
84
```







```
12 foreign key (customer_name) references customer(customer_name)on delete cascade on update cascade,
13 foreign key (loan_number) references loan(loan_number)on delete cascade on update cascade);
14 • show tables;
15
16 • insert into branch values('SBI PD NAGAR','BANGALORE', 200000);
17 • insert into branch values('SBI RAJAJI NAGAR','BANGALORE', 500000);
18 • insert into branch values('SBI JAYANAGAR','DELHI', 660000);
19 • insert into branch values('SBI VIJAY NAGAR','CHENNAI', 870000);
20 • insert into branch values('SBI HOSAKEREHALLI','CHENNAI', 550000);
21 • commit;
22 • select *from branch;
23
24 • insert into accounts values(1001, 'SBI PD NAGAR',15000);
25 • insert into accounts values(1002, 'SBI RAJAJI NAGAR',25000);
```

|   | branch_name       | branch_city | assets |
|---|-------------------|-------------|--------|
| ▶ | SBI HOSAKEREHALLI | CHENNAI     | 550000 |
|   | SBI JAYANAGAR     | DELHI       | 660000 |
|   | SBI PD NAGAR      | BANGALORE   | 200000 |
|   | SBI RAJAJI NAGAR  | BANGALORE   | 500000 |
|   | SBI VIJAY NAGAR   | CHENNAI     | 870000 |
| * | NULL              | NULL        | NULL   |



```
18 • insert into branch values('SBI JAYANAGAR','DELHI', 660000);
19 • insert into branch values('SBI VIJAY NAGAR','CHENNAI', 870000);
20 • insert into branch values('SBI HOSAKEREHALLI','CHENNAI', 550000);
21 • commit;
22 • select *from branch;
23
24 • insert into accounts values(1001, 'SBI PD NAGAR',15000);
25 • insert into accounts values(1002, 'SBI RAJAJI NAGAR',25000);
26 • insert into accounts values(1003 , 'SBI JAYANAGAR',500);
27 • insert into accounts values(1004, 'SBI VIJAY NAGAR',10000);
28 • insert into accounts values(1005, 'SBI VIJAY NAGAR',40000);
29 • commit;
30 • select *from accounts;
31
```

|   | accno | branch_name     | balance |
|---|-------|-----------------|---------|
| ▶ | 1003  | SBI JAYANAGAR   | 500     |
|   | 1004  | SBI VIJAY NAGAR | 10000   |
|   | 1005  | SBI VIJAY NAGAR | 40000   |
| * | NULL  | NULL            | NULL    |



|   | customer_name | customer_street | customer_city |
|---|---------------|-----------------|---------------|
| ▶ | FAIZAL        | RESEDENCY ROAD  | BANGALORE     |
|   | KEZAR         | M G ROAD        | BANGALORE     |
|   | LAL KRISHNA   | ST MKS ROAD     | DELHI         |
|   | RAHUL         | AUGSTEN ROAD    | CHENNAI       |
|   | RAJEEV        | DICKNSN ROAD    | CHENNAI       |
| • | NULL          | NULL            | NULL          |



MySQL Workbench

dbms server x

File Edit View Query Database Server Tools Scripting Help

lab 3 dbms lab 4 dbms lab 5 dbms lab 1 dbms lab 2 dbms test 1 x

Limit to 1000 rows

```
36 • insert into customer values('RAJEEV','DICKNSN ROAD','CHENNAI');
37 • commit;
38 • select *from customer;
39
40 • insert into depositor values('KEZAR',1001);
41 • insert into depositor values('KEZAR',1002);
42 • insert into depositor values('LAL KRISHNA',1003);
43 • insert into depositor values('RAHUL',1004);
44 • insert into depositor values('RAHUL',1005);
45 • commit;
46 • select *from depositor;
47
48 • insert into loan values(10011 ,'SBI PD NAGAR',10000);
49 • insert into loan values(10012,'SBI RAJAJI NAGAR',5000);
```

Result Grid

|   | customer_name | accno |
|---|---------------|-------|
| ▶ | LAL KRISHNA   | 1003  |
|   | RAHUL         | 1004  |
|   | RAHUL         | 1005  |
| * | NULL          | NULL  |

depositor5 x

Apply



```
45 • commit;
46 • select *from depositor;
47
48 • insert into loan values(10011 , 'SBI PD NAGAR',10000);
49 • insert into loan values(10012, 'SBI RAJAJI NAGAR',5000);
50 • insert into loan values(10013, 'SBI RAJAJI NAGAR',20000);
51 • insert into loan values(10014, 'SBI JAYANAGAR',15000);
52 • insert into loan values(10015, 'SBI HOSAKEREHALLI',25000);
53 • commit;
54 • select *from loan;
55
56 • insert into borrower values('FAIZAL', 10011);
57 • insert into borrower values('KEZAR', 10012);
58 • insert into borrower values('FAIZAL', 10013);
```

Result Grid Filter Rows: Edit: Export/Import: Wrap Cell Content:

|   | loan_number | branch_name       | amount |
|---|-------------|-------------------|--------|
| ▶ | 10011       | SBI PD NAGAR      | 10000  |
|   | 10012       | SBI RAJAJI NAGAR  | 5000   |
|   | 10013       | SBI RAJAJI NAGAR  | 20000  |
|   | 10014       | SBI JAYANAGAR     | 15000  |
|   | 10015       | SBI HOSAKEREHALLI | 25000  |
| * | NULL        | NULL              | NULL   |

loan 6 x

Apply



```
54 • select *from loan;
55
56 • insert into borrower values('FAIZAL', 10011);
57 • insert into borrower values('KEZAR', 10012);
58 • insert into borrower values('FAIZAL', 10013);
59 • insert into borrower values('LAL KRISHNA', 10014);
60 • insert into borrower values('RAJEEV', 10015);
61 • commit;
62 • select *from borrower;
63
64 /*1*/
65 • select customer_name from depositor d, accounts a where d.accno=a.accno and a.branch_name="SBI VIJAY NAGAR" group by d.customer_name having count(d.customer_name) >= 2;
66
67 /*2*/
```

Result Grid Filter Rows: Edit: Export/Import: Wrap Cell Content:

|   | customer_name | loan_number |
|---|---------------|-------------|
| ▶ | FAIZAL        | 10011       |
|   | KEZAR         | 10012       |
|   | FAIZAL        | 10013       |
|   | LAL KRISHNA   | 10014       |
|   | RAJEEV        | 10015       |
| * | NULL          | NULL        |

borrower 7 x

Apply







```
64 /*1*/
65 • select customer_name from depositor d, accounts a where d.accno=a.accno and a.branch_name="SBI VIJAY NAGAR" group by d.customer_name having count(d.customer_name) >= 2;
66
67 /*2*/
68 • select d.customer_name from accounts a, branch b, depositor d where b.branch_name=a.branch_name and a.accno=d.accno and b.branch_city="BANGALORE"
69 group by d.customer_name having count(distinct b.branch_name)=(select count(branch_name) from branch where branch_city="BANGALORE");
70
71 /*3*/
72 • delete from accounts where branch_name in(select branch_name from branch where branch_city="BANGALORE");
73 • select *from accounts;
74
75 /*4*/
76 • alter table accounts add (account_type varchar(20));
77
```

Result Grid Filter Rows: Edit: Export/Import: Wrap Cell Content:

|   | accno | branch_name     | balance |
|---|-------|-----------------|---------|
| ▶ | 1003  | SBI JAYANAGAR   | 500     |
|   | 1004  | SBI VIJAY NAGAR | 10000   |
|   | 1005  | SBI VIJAY NAGAR | 40000   |
| * | NULL  | NULL            | NULL    |

accounts 2 x

Apply

MySQL Workbench

dbms server x

File Edit View Query Database Server Tools Scripting Help

lab 3 dbms lab 4 dbms lab 5 dbms lab 1 dbms lab 2 dbms test 1 x

Limit to 1000 rows

```
67 /*2*/
68 • select d.customer_name from accounts a, branch b, depositor d where b.branch_name=a.branch_name and a.accno=d.accno and b.branch_city="BANGALORE"
69 group by d.customer_name having count(distinct b.branch_name)=(select count(branch_name) from branch where branch_city="BANGALORE");
70
71 /*3*/
72 • delete from accounts where branch_name in(select branch_name from branch where branch_city="BANGALORE");
73 • select *from accounts;
74
75 /*4*/
76 • alter table accounts add (account_type varchar(20));
77
78 /*5*/
79 • select c.customer_name,c.customer_street,c.customer_city,l.branch_name,b.loan_number,l.amount
80 from customer c join borrower b on c.customer name=b.customer name
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

|   | customer_name | customer_street | customer_city | branch_name       | loan_number | amount |
|---|---------------|-----------------|---------------|-------------------|-------------|--------|
| ▶ | RAJEEV        | DICKNSN ROAD    | CHENNAI       | SBI HOSAKEREHALLI | 10015       | 25000  |

Result 3 x

Read Only