MariaDB [(none)]> create database one;

Query OK, 1 row affected (0.002 sec)

MariaDB [(none)]> use one;

Database changed

MariaDB [one]> create table branch(bname varchar(10) primary key,bcity varchar(10),a\_amt int check(a\_amt >= 0));

Query OK, 0 rows affected (0.014 sec)

MariaDB [one]> create table customer(cname varchar(10) primary key,cstreet varchar(10),ccity varchar(10));

Query OK, 0 rows affected (0.010 sec)

MariaDB [one]> create table account(acc\_no int primary key,bname varchar(10) not null,balance int check(balance >= 0),foreign key (bname) references branch(bname));

Query OK, 0 rows affected (0.014 sec)

MariaDB [one]> create table depositor(cname varchar(10),acc\_no int,foreign key (cname) references customer(cname),foreign key (acc\_no) references account(acc\_no));

Query OK, 0 rows affected (0.012 sec)

MariaDB [one]> create table loan(acc\_no int,loan\_no int primary key,bname varchar(10),amt int,foreign key (acc\_no) references account(acc\_no),foreign key (bname) references branch(bname));

Query OK, 0 rows affected (0.016 sec)

MariaDB [one]> create table borrower(cname varchar(10),loan\_no int,foreign key (cname) references customer(cname),foreign key (loan\_no) references loan(loan\_no));

Query OK, 0 rows affected (0.012 sec)

MariaDB [one]> insert into branch values('pimpri','pune',500000),('akurdi','pune',400000),('chinchwad','pune',600000);

Query OK, 3 rows affected (0.004 sec)

Records: 3 Duplicates: 0 Warnings: 0

MariaDB [one]> insert into customer values('alice','a nagar','pune'),('bob','b nagar','pune'),('charlie','c nagar','pune');

Query OK, 3 rows affected (0.003 sec)

Records: 3 Duplicates: 0 Warnings: 0

MariaDB [one]> insert into account values(1,'pimpri',10000),(2,'akurdi',15000),(3,'chinchwad',12000);

Query OK, 3 rows affected (0.003 sec)

Records: 3 Duplicates: 0 Warnings: 0

MariaDB [one]> insert into depositor values('alice',1),('bob',2),('charlie',3);

Query OK, 3 rows affected (0.004 sec)

Records: 3 Duplicates: 0 Warnings: 0

MariaDB [one]> insert into loan values (1,101,'pimpri',13000),(2,102,'akurdi',14000),(3,103,'chinchwad',11000);

Query OK, 3 rows affected (0.003 sec)

Records: 3 Duplicates: 0 Warnings: 0

MariaDB [one]> insert into borrower values('alice',101),('bob',102),('charlie',103);

Query OK, 3 rows affected (0.002 sec)

Records: 3 Duplicates: 0 Warnings: 0

MariaDB [one]> select \* from account;

+--------+-----------+---------+

| acc\_no | bname | balance |

+--------+-----------+---------+

| 1 | pimpri | 10000 |

| 2 | akurdi | 15000 |

| 3 | chinchwad | 12000 |

+--------+-----------+---------+

3 rows in set (0.000 sec)

MariaDB [one]> select \* from branch;

+-----------+-------+--------+

| bname | bcity | a\_amt |

+-----------+-------+--------+

| akurdi | pune | 400000 |

| chinchwad | pune | 600000 |

| pimpri | pune | 500000 |

+-----------+-------+--------+

3 rows in set (0.000 sec)

MariaDB [one]> select \* from customer;

+---------+---------+-------+

| cname | cstreet | ccity |

+---------+---------+-------+

| alice | a nagar | pune |

| bob | b nagar | pune |

| charlie | c nagar | pune |

+---------+---------+-------+

3 rows in set (0.000 sec)

MariaDB [one]> select \* from depositor;

+---------+--------+

| cname | acc\_no |

+---------+--------+

| alice | 1 |

| bob | 2 |

| charlie | 3 |

+---------+--------+

3 rows in set (0.000 sec)

MariaDB [one]> select \* from loan;

+--------+---------+-----------+-------+

| acc\_no | loan\_no | bname | amt |

+--------+---------+-----------+-------+

| 1 | 101 | pimpri | 13000 |

| 2 | 102 | akurdi | 14000 |

| 3 | 103 | chinchwad | 11000 |

+--------+---------+-----------+-------+

3 rows in set (0.000 sec)

MariaDB [one]> select \* from borrower;

+---------+---------+

| cname | loan\_no |

+---------+---------+

| alice | 101 |

| bob | 102 |

| charlie | 103 |

+---------+---------+

3 rows in set (0.000 sec)

MariaDB [one]> select distinct bname from loan;

+-----------+

| bname |

+-----------+

| akurdi |

| chinchwad |

| pimpri |

+-----------+

3 rows in set (0.002 sec)

MariaDB [one]> select loan\_no from loan where bname = 'pimpri' and amt > 12000;

+---------+

| loan\_no |

+---------+

| 101 |

+---------+

1 row in set (0.003 sec)

MariaDB [one]> select c.cname,b.loan\_no,l.amt from customer c,borrower b,loan l where c.cname = b.cname and b.loan\_no = l.loan\_no;

+---------+---------+-------+

| cname | loan\_no | amt |

+---------+---------+-------+

| alice | 101 | 13000 |

| bob | 102 | 14000 |

| charlie | 103 | 11000 |

+---------+---------+-------+

3 rows in set (0.002 sec)

MariaDB [one]> select c.cname from customer c,borrower b,loan l where c.cname = b.cname and b.loan\_no = l.loan\_no and l.bname = 'akurdi' order by c.cname;

+-------+

| cname |

+-------+

| bob |

+-------+

1 row in set (0.001 sec)

MariaDB [one]> select c.cname from customer where c.cname IN(select cname from depositor) or c.cname IN(select cname from borrower);

ERROR 1054 (42S22): Unknown column 'c.cname' in 'field list'

MariaDB [one]> select c.cname from customer c where c.cname IN(select cname from depositor) or c.cname IN(select cname from borrower);

+---------+

| cname |

+---------+

| alice |

| bob |

| charlie |

+---------+

3 rows in set (0.002 sec)

MariaDB [one]> select c.cname from customer c where c.cname IN(select cname from depositor) and c.cname IN(select cname from borrower);

+---------+

| cname |

+---------+

| alice |

| bob |

| charlie |

+---------+

3 rows in set (0.001 sec)

MariaDB [one]> select bname,avg(balance) from account where bname='pimpri';

+--------+--------------+

| bname | avg(balance) |

+--------+--------------+

| pimpri | 10000.0000 |

+--------+--------------+

1 row in set (0.002 sec)

MariaDB [one]> select bname,avg(balance) from account group by bname;

+-----------+--------------+

| bname | avg(balance) |

+-----------+--------------+

| akurdi | 15000.0000 |

| chinchwad | 12000.0000 |

| pimpri | 10000.0000 |

+-----------+--------------+

3 rows in set (0.000 sec)

MariaDB [one]> select bname,avg(balance) from account group by bname having avg(balance) > 12000 ;

+--------+--------------+

| bname | avg(balance) |

+--------+--------------+

| akurdi | 15000.0000 |

+--------+--------------+

1 row in set (0.000 sec)

MariaDB [one]> select sum(amt) from loan ;

+----------+

| sum(amt) |

+----------+

| 38000 |

+----------+

1 row in set (0.001 sec)

MariaDB [one]>