

1) INSURANCE DATABASE

```
mysql> insert into person values('10','sam','banglore');insert into person value
s('20','shaan','coorg');insert into person values('30','sakshi','mumbai');insert
into person values('40','rajath','mysore');insert into person values('50','tanya',
'a','delhi');
Query OK, 1 row affected (0.21 sec)

Query OK, 1 row affected (0.19 sec)

Query OK, 1 row affected (0.14 sec)

Query OK, 1 row affected (0.14 sec)

Query OK, 1 row affected (0.07 sec)

mysql> select * from person;
+-----+-----+-----+
| driverid | name | address |
+-----+-----+-----+
| 10 | sam | banglore |
| 20 | shaan | coorg |
| 30 | sakshi | mumbai |
| 40 | rajath | mysore |
| 50 | tanya | delhi |
+-----+-----+-----+
5 rows in set (0.00 sec)

mysql>
```

Database changed

```
MariaDB [insurance]> CREATE TABLE OWNS (driverid varchar(30),REGNO VARCHAR(20),
-> FOREIGN KEY (driverid) REFERENCES Person(driverid),
-> FOREIGN KEY (REGNO) REFERENCES CAR(REGNO)
-> );
ERROR 1005 (HY000): Can't create table `insurance`.`OWNS` (errno: 150 "Foreign key constraint is
incorrectly formed")
MariaDB [insurance]> CREATE TABLE OWNS (driverid varchar(30),REGNO VARCHAR(20),
-> FOREIGN KEY (driverid) REFERENCES person(driverid),
-> FOREIGN KEY (REGNO) REFERENCES CAR(REGNO)
-> );
Query OK, 0 rows affected (0.129 sec)

MariaDB [insurance]> insert into OWNS VALUES('A01','KA052250');
Query OK, 1 row affected (0.193 sec)

MariaDB [insurance]> insert into OWNS VALUES('A02','KA053408');
Query OK, 1 row affected (0.002 sec)

MariaDB [insurance]> insert into OWNS VALUES('A03','KA031181');
Query OK, 1 row affected (0.004 sec)

MariaDB [insurance]> insert into OWNS VALUES('A04','KA095477');
Query OK, 1 row affected (0.002 sec)

MariaDB [insurance]> insert into OWNS VALUES('A05','KA041702');
Query OK, 1 row affected (0.008 sec)

MariaDB [insurance]> insert into OWNS VALUES('A01','KA052250');
Query OK, 1 row affected (0.003 sec)
```

```
MariaDB [insurance]>
MariaDB [insurance]> Create table participated(driverid varchar(30),REGNO VARCHAR(20),REPORT_NO
INTEGER,damage_amount integer,PRIMARY KEY (damage_amount),
-> FOREIGN KEY (driverid) REFERENCES person(driverid),
-> FOREIGN KEY (REGNO) REFERENCES CAR(REGNO),
-> FOREIGN KEY (REPORT_NO) REFERENCES ACCIDENT(REPORT_NO));
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to y
our MariaDB server version for the right syntax to use near '_amount),
FOREIGN KEY (driverid) REFERENCES person(driverid),
FOREIGN KEY (RE... at line 1
MariaDB [insurance]>
MariaDB [insurance]>
MariaDB [insurance]>
MariaDB [insurance]> Create table participated(driverid varchar(30),REGNO VARCHAR(20),REPORT_NO
INTEGER,damage_amount integer,PRIMARY KEY (damage_amount),
-> FOREIGN KEY (driverid) REFERENCES person(driverid),
-> FOREIGN KEY (REGNO) REFERENCES CAR(REGNO),
-> FOREIGN KEY (REPORT_NO) REFERENCES ACCIDENT(REPORT_NO));
Query OK, 0 rows affected (0.202 sec)

MariaDB [insurance]>
MariaDB [insurance]>
MariaDB [insurance]>
MariaDB [insurance]> insert into participated values('A01','KA052250',11,10000);
Query OK, 1 row affected (0.210 sec)

MariaDB [insurance]> insert into participated values('A02','KA053408',12,50000);
Query OK, 1 row affected (0.002 sec)

MariaDB [insurance]> insert into participated values('A03','KA095477',13,25000);
Query OK, 1 row affected (0.017 sec)

MariaDB [insurance]> insert into participated values('A04','KA031181',14,3000);
Query OK, 1 row affected (0.002 sec)

MariaDB [insurance]> insert into participated values('A05','KA041702',15,5000);
Query OK, 1 row affected (0.003 sec)
```

12:35 PM | 4.1KB/s ⌂ ☺

Report issues at <https://termux.com/issues>

```
$ mysql
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 4
Server version: 10.5.8-MariaDB MariaDB Server

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> use insurance;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
MariaDB [insurance]> select * from person
-> select * from person;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to y
our MariaDB server version for the right syntax to use near 'select * from person' at line 2
MariaDB [insurance]>
MariaDB [insurance]> select * from person;
+-----+-----+
| driverid | name      | address          |
+-----+-----+
| A01      | richard   | srinivasnagar   |
| A02      | pradeep    | rajajinagar     |
| A03      | smith      | ashoknagar     |
| A04      | venu       | NR colony       |
| A05      | Jhon       | hanumanthnagar |
+-----+-----+
5 rows in set (0.029 sec)

MariaDB [insurance]> select * from CAR;
+-----+-----+
| REGNO  | MODEL     | YEAR           |
+-----+-----+
| KA031181 | launcher | 1957          |
| KA041702 | audi     | 2005          |
| KA052250 | indica   | 1990          |
| KA053408 | honda    | 2008          |
| KA095477 | toyota   | 1998          |
+-----+-----+
5 rows in set (0.002 sec)

MariaDB [insurance]> SELECT * FROM ACCIDENT;
+-----+-----+
| REPORT_NO | ACC_DATE  | LOCATION        |
+-----+-----+
| 11        | 2003-01-01 | mysore road    |
| 12        | 2004-02-02 | South end circle|
| 13        | 2003-01-21 | bull temple road|
| 14        | 2008-02-17 | mysore road    |
| 15        | 2005-03-04 | mysore road    |
+-----+-----+
5 rows in set (0.002 sec)

MariaDB [insurance]> SELECT * FROM OWNS;
+-----+-----+
| driverid | REGNO    |
+-----+-----+
| A01      | KA052250  |
| A02      | KA053408  |
| A03      | KA031181  |
| A04      | KA095477  |
| A05      | KA041702  |
| A01      | KA052250  |
+-----+-----+
6 rows in set (0.002 sec)

MariaDB [insurance]> SELECT * FROM PARTICIPATED;
ERROR 1146 (42S02): Table 'insurance.PARTICIPATED' doesn't exist
MariaDB [insurance]>
MariaDB [insurance]> SELECT * FROM participated;
+-----+-----+
| driverid | REGNO    | REPORT_NO | damage_amount |
+-----+-----+
| A04      | KA031181 | 14        | 3000          |
| A05      | KA041702 | 15        | 5000          |
| A01      | KA052250 | 11        | 10000         |
| A03      | KA095477 | 13        | 25000         |
| A02      | KA053408 | 12        | 50000         |
+-----+-----+
5 rows in set (0.004 sec)

MariaDB [insurance]>
```

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```
MariaDB [insurance]>
MariaDB [insurance]> UPDATE participated SET damage_amount=25000 WHERE REPORT_NO=12;
Query OK, 1 row affected (0.005 sec)
Rows matched: 1  Changed: 1  Warnings: 0

MariaDB [insurance]> select * from participated;
+-----+-----+-----+-----+
| driverid | REGNO   | REPORT_NO | damage_amount |
+-----+-----+-----+-----+
| A01      | KA052250 | 11        | 10000          |
| A02      | KA053408 | 12        | 25000          |
| A03      | KA095477 | 13        | 25000          |
| A04      | KA031181 | 14        | 3000           |
| A05      | KA041702 | 15        | 5000           |
+-----+-----+-----+-----+
5 rows in set (0.002 sec)

MariaDB [insurance]> █
```

```
|    6      | 2005-07-09 | richmondroad |
+-----+-----+-----+-----+
5 rows in set (0.002 sec)

MariaDB [insurance]> insert into ACCIDENT VALUES(6,'2005-07-09','richmondroad');
Query OK, 1 row affected (0.222 sec)

MariaDB [insurance]> select * from ACCIDENT ;
+-----+-----+-----+
| REPORT_NO | ACC_DATE   | LOCATION      |
+-----+-----+-----+
|       6   | 2005-07-09 | richmondroad |
|      11   | 2003-01-01 | mysore road   |
|      12   | 2004-02-02 | South end circle |
|      13   | 2003-01-21 | bull temple road |
|      14   | 2008-02-17 | mysore road   |
|      15   | 2005-03-04 | mysore road   |
+-----+-----+-----+
6 rows in set (0.035 sec)
```

```
MariaDB [insurance]> select count(year)
-> from CAR
-> WHERE year=2008;
+-----+
| count(year) |
+-----+
|          1 |
+-----+
1 row in set (0.182 sec)
```

```
1 row in set (0.182 sec)

MariaDB [insurance]> select count(model)
-> from CAR
-> WHERE MODEL='INDICA';
+-----+
| count(model) |
+-----+
|          1 |
+-----+
1 row in set (0.004 sec)

MariaDB [insurance]> █
```

2) **BANKING ENTERPRISE DATABASE**

9:44 AM | 0.1KB/s ⌂ ⊖ ⊚



```
MariaDB [banking_enterprise]> Create table branch (branchname varchar(50), branchcity varchar (50),assets integer,PRIMARY KEY(branchname));  
Query OK, 0 rows affected (0.020 sec)
```

```
MariaDB [banking_enterprice]> INSERT INTO branch VALUES  
-> ('SBIchamrajpet','bangalore',50000);  
Query OK, 1 row affected (0.008 sec)
```

```
MariaDB [banking_enterprice]> INSERT INTO branch VALUES('SBIresidencyroad ','bangalore',10000);  
Query OK, 1 row affected (0.002 sec)
```

```
MariaDB [banking_enterprice]> INSERT INTO branch VALUES  
-> ('SBIshivajiroad','bombay',20000);  
Query OK, 1 row affected (0.002 sec)
```

```
MariaDB [banking_enterprice]> INSERT INTO branch VALUES  
-> ('SBIparliamentroad ','delhi',10000);  
Query OK, 1 row affected (0.006 sec)
```

```
MariaDB [banking_enterprice]> INSERT INTO branch VALUES  
-> ('SBIjantarmantar','delhi',20000);  
Query OK, 1 row affected (0.006 sec)
```

```
MariaDB [banking_enterprice]> Create table bankaccount(accno integer,branchname VARCHAR(50),balance integer,
-> PRIMARY KEY(accno),
-> FOREIGN KEY (branchname) REFERENCES branch(branchname));
Query OK, 0 rows affected (0.027 sec)

MariaDB [banking_enterprice]>
MariaDB [banking_enterprice]> insert into bankaccount values(1,'SBIchamrajpet',2000);
Query OK, 1 row affected (0.010 sec)

MariaDB [banking_enterprice]> insert into bankaccount values(2,'SBIresidencyroad',5000);
Query OK, 1 row affected (0.004 sec)

MariaDB [banking_enterprice]> insert into bankaccount values(3,'SBIshivajiroad',6000);
Query OK, 1 row affected (0.009 sec)

MariaDB [banking_enterprice]> insert into bankaccount values(4,'SBIparliamentroad',9000);
Query OK, 1 row affected (0.002 sec)

MariaDB [banking_enterprice]> insert into bankaccount values(5,'SBIjantarmantar',8000);
Query OK, 1 row affected (0.003 sec)

MariaDB [banking_enterprice]> insert into bankaccount values(6,'SBIshivajiroad',4000);
Query OK, 1 row affected (0.005 sec)

MariaDB [banking_enterprice]> insert into bankaccount values(8,'SBIresidencyroad',4000);
Query OK, 1 row affected (0.003 sec)

MariaDB [banking_enterprice]> insert into bankaccount values(9,'SBIparliamentroad',3000);
Query OK, 1 row affected (0.002 sec)

MariaDB [banking_enterprice]> insert into bankaccount values(10,'SBIresidencyroad',5000);
Query OK, 1 row affected (0.002 sec)

MariaDB [banking_enterprice]> insert into bankaccount values(11,'SBIjantarmantar',2000);
```

```
MariaDB [banking_enterprice]> create table bankcustomer(customername varchar(30),customerstreet  
varchar(30),customercity varchar(30),  
-> PRIMARY KEY (customername)  
-> );  
Query OK, 0 rows affected (0.025 sec)

MariaDB [banking_enterprice]> insert into bankcustomer values('avinash','bulltempleroad','bangal  
ore');  
Query OK, 1 row affected (0.015 sec)

MariaDB [banking_enterprice]> insert into bankcustomer values('dinesh','bannergattaroad','bangal  
ore');  
Query OK, 1 row affected (0.003 sec)

MariaDB [banking_enterprice]> insert into bankcustomer values('mohan','nationalcollegeroad','ban  
galore');  
Query OK, 1 row affected (0.005 sec)

MariaDB [banking_enterprice]> insert into bankcustomer values('nikil','akbarroad','delhi');  
Query OK, 1 row affected (0.003 sec)

MariaDB [banking_enterprice]> insert into bankcustomer values('ravi','pritvirajroad','delhi');  
Query OK, 1 row affected (0.007 sec)
```

```

Mar 18 09: [banking_enterprice]
MariaDB [banking_enterprice]> CREATE TABLE depositor
    -> (customername varchar(30),
    -> accno int,
    -> FOREIGN KEY (customername) REFERENCES bankcustomer(customername),
    -> FOREIGN KEY (accno) REFERENCES bankaccount(accno));
Query OK, 0 rows affected (0.021 sec)

MariaDB [banking_enterprice]>
MariaDB [banking_enterprice]> insert into depositor values('avinesh',1);
ERROR 1452 (23000): Cannot add or update a child row: a foreign key constraint fails (`banking_enterprice`.`depositor`, CONSTRAINT `depositor_ibfk_1` FOREIGN KEY (`customername`) REFERENCES `bankcustomer` (`customername`))
MariaDB [banking_enterprice]> insert into depositor values('dinesh',2);
Query OK, 1 row affected (0.003 sec)

MariaDB [banking_enterprice]> insert into depositor values('nikil',4);
Query OK, 1 row affected (0.015 sec)

MariaDB [banking_enterprice]> insert into depositor values('ravi',5);
Query OK, 1 row affected (0.006 sec)

MariaDB [banking_enterprice]> insert into depositor values('avinash',8);
Query OK, 1 row affected (0.003 sec)

MariaDB [banking_enterprice]> insert into depositor values('nikil',9);
Query OK, 1 row affected (0.003 sec)

MariaDB [banking_enterprice]> insert into depositor values('dinesh',10);
Query OK, 1 row affected (0.003 sec)

MariaDB [banking_enterprice]> insert into depositor values('nikil',11);
Query OK, 1 row affected (0.012 sec)

MariaDB [banking_enterprice]> select * from depositor;
+-----+-----+
| customername | accno |
+-----+-----+
| dinesh       |     2 |
| nikil        |     4 |
| ravi         |     5 |
| avinash      |     8 |
| nikil        |     9 |
| dinesh        |    10 |
| nikil        |    11 |
+-----+-----+
7 rows in set (0.053 sec)

```

```
MariaDB [banking_enterprice]> CREATE TABLE borrower
-> (customername varchar(30),loannumber int,
-> PRIMARY KEY(customername),
-> FOREIGN KEY (loannumber) REFERENCES LOAN(loannumber)
-> );
Query OK, 0 rows affected (0.044 sec)

MariaDB [banking_enterprice]> Insert into borrower values('avinash',1);
Query OK, 1 row affected (0.011 sec)

MariaDB [banking_enterprice]> Insert into borrower values('dinesh',2);
Query OK, 1 row affected (0.004 sec)

MariaDB [banking_enterprice]> Insert into borrower values('ravi',3);
Query OK, 1 row affected (0.010 sec)

MariaDB [banking_enterprice]> Insert into borrower values('nikil',4);
Query OK, 1 row affected (0.002 sec)

MariaDB [banking_enterprice]> Insert into borrower values('mohan',5);
Query OK, 1 row affected (0.004 sec)
```

```
Database changed
MariaDB [banking_enterprice]> SELECT * FROM BRANCH;
ERROR 1146 (42S02): Table 'banking_enterprice.BRANCH' doesn't exist
MariaDB [banking_enterprice]> SELECT * FROM branch;
+-----+-----+-----+
| branchname | branchcity | assets |
+-----+-----+-----+
| SBIchamrajpet | bangalore | 50000 |
| SBIjantarmantar | delhi | 20000 |
| SBIparliamentroad | delhi | 10000 |
| SBIresidencyroad | bangalore | 10000 |
| SBIshivajiroad | bombay | 20000 |
+-----+-----+-----+
5 rows in set (0.034 sec)

MariaDB [banking_enterprice]> select * from bankaccount;
+-----+-----+-----+
| accno | branchname | balance |
+-----+-----+-----+
| 1 | SBIchamrajpet | 2000 |
| 2 | SBIresidencyroad | 5000 |
| 3 | SBIshivajiroad | 6000 |
| 4 | SBIparliamentroad | 9000 |
| 5 | SBIjantarmantar | 8000 |
| 6 | SBIshivajiroad | 4000 |
| 8 | SBIresidencyroad | 4000 |
| 9 | SBIparliamentroad | 3000 |
| 10 | SBIresidencyroad | 5000 |
| 11 | SBIjantarmantar | 2000 |
+-----+-----+-----+
10 rows in set (0.002 sec)

MariaDB [banking_enterprice]> select * from bankcustomer;
+-----+-----+-----+
| customername | customerstreet | customercity |
+-----+-----+-----+
| avinash | bulltempleroad | bangalore |
| dinesh | bannergattaroad | bangalore |
| mohan | nationalcollegeroad | bangalore |
| nikil | akbarroad | delhi |
| ravi | pritvirajroad | delhi |
+-----+-----+-----+
5 rows in set (0.002 sec)
```

```
MariaDB [banking_enterprice]> select * from depositor;
+-----+-----+
| customername | accno |
+-----+-----+
| dinesh      |    2 |
| nikil       |    4 |
| ravi        |    5 |
| avinash     |    8 |
| nikil       |    9 |
| dinesh      |   10 |
| nikil       |   11 |
+-----+-----+
7 rows in set (0.002 sec)
```

```
MariaDB [banking_enterprice]> select * from LOAN;
+-----+-----+-----+
| loannumber | branchname      | amount |
+-----+-----+-----+
|      1 | SBIChamrajpet | 1000 |
|      2 | SBIresidencyroad | 2000 |
|      3 | SBIshivajiroad | 3000 |
|      4 | SBIparliamentroad | 4000 |
|      5 | SBIjantarmantar | 5000 |
+-----+-----+-----+
5 rows in set (0.003 sec)
```

```
MariaDB [banking_enterprice]> SELECT * FROM borrower;
+-----+-----+
| customername | loannumber |
+-----+-----+
| avinash      |      1 |
| dinesh       |      2 |
| ravi         |      3 |
| nikil        |      4 |
| mohan        |      5 |
+-----+-----+
5 rows in set (0.003 sec)
```

```
MariaDB [banking_enterprice]> select C.customername
-> from depositor C
-> WHERE EXISTS(
->   SELECT D.customername, count(D.customername)
->   from borrower D, bankaccount BA
->   WHERE
->     D.loannumber=BA.accno AND
->     C.customername=D.customername AND
->     BA.branchname='SBIresidencyroad'
->   group by D.customername
->   HAVING COUNT(D.customername)>=2);
Empty set (0.142 sec)
```

```
MariaDB [banking_enterprice]> █
```

```
MariaDB [banking_enterprice]>
MariaDB [banking_enterprice]> select BC.customername from depositor BC WHERE NOT EXISTS( SELECT
branchname from branch WHERE branchcity='delhi');
Empty set (0.162 sec)
```

```
MariaDB [banking_enterprice]>
MariaDB [banking_enterprice]>
MariaDB [banking_enterprice]> DELETE FROM bankaccount WHERE branchname IN(SELECT branchname FROM
branch WHERE branchcity='bombay');
Query OK, 2 rows affected (0.122 sec)

MariaDB [banking_enterprice]> select * from bankaccount;
+-----+-----+-----+
| accno | branchname      | balance |
+-----+-----+-----+
|    1 | SBIchamrajpet   |    2000 |
|    2 | SBIresidencyroad |    5000 |
|    4 | SBIParliamentroad |    9000 |
|    5 | SBIjantarmantar  |    8000 |
|    8 | SBIresidencyroad |    4000 |
|    9 | SBIParliamentroad |    3000 |
|   10 | SBIresidencyroad |    5000 |
|   11 | SBIjantarmantar  |    2000 |
+-----+-----+-----+
8 rows in set (0.002 sec)

MariaDB [banking_enterprice]>
```

3) **SUPPLIER DATABASE**

```
MariaDB [supplier]> create table SUPPLIERS
-> (
-> sid integer,
-> sname varchar(30),
-> address varchar(30),
-> PRIMARY KEY(sid)
-> );
```

Query OK, 0 rows affected (0.277 sec)

```
MariaDB [supplier]>
MariaDB [supplier]> CREATE TABLE PARTS
-> (
-> pid integer,
-> pname varchar(30),
-> color varchar(30),
-> PRIMARY KEY(pid)
-> );
```

Query OK, 0 rows affected (0.025 sec)

```
MariaDB [supplier]> create table CATALOGUE
-> (
-> sid integer,
-> pid integer,
-> cost VARCHAR(30),
-> FOREIGN KEY (sid) REFERENCES SUPPLIERS(sid),
-> FOREIGN KEY (pid) REFERENCES PARTS(pid)
-> );
```

Query OK, 0 rows affected (0.023 sec)

```
MariaDB [supplier]> insert into SUPPLIERS VALUES(10001, 'Acmewidget', 'bangalore');
Query OK, 1 row affected (0.026 sec)
```

```
MariaDB [supplier]> insert into SUPPLIERS VALUES(10002, 'jhons', 'kolkata');
Query OK, 1 row affected (0.009 sec)
```

```
MariaDB [supplier]> insert into SUPPLIERS VALUES(10003, 'vimal', 'mumbai');
Query OK, 1 row affected (0.002 sec)
```

```

MariaDB [supplier]> insert into SUPPLIERS VALUES(10002,'jhons','kolkata');
Query OK, 1 row affected (0.009 sec)

MariaDB [supplier]> insert into SUPPLIERS VALUES(10003,'vimal','mumbai');
Query OK, 1 row affected (0.002 sec)

MariaDB [supplier]> insert into SUPPLIERS VALUES(10004,'reliance','delhi');
Query OK, 1 row affected (0.008 sec)

MariaDB [supplier]> insert into PARTS VALUES(20001,'book','red');
Query OK, 1 row affected (0.015 sec)

MariaDB [supplier]> insert into PARTS VALUES(20002,'pen','red');
Query OK, 1 row affected (0.006 sec)

MariaDB [supplier]> insert into PARTS VALUES(20003,'pencil','green');
Query OK, 1 row affected (0.003 sec)

MariaDB [supplier]> insert into PARTS VALUES(20004,'mobile','green');
Query OK, 1 row affected (0.002 sec)

MariaDB [supplier]> insert into PARTS VALUES(20005,'charger','black');
Query OK, 1 row affected (0.004 sec)

```

```

Query OK, 1 row affected (0.002 sec)

MariaDB [supplier]> insert into PARTS VALUES(20005,'charger','black');
Query OK, 1 row affected (0.004 sec)

MariaDB [supplier]> insert into CATALOGUE VALUES(10001,20001,10);
Query OK, 1 row affected (0.033 sec)

MariaDB [supplier]> insert into CATALOGUE VALUES(10001,20002,10);
Query OK, 1 row affected (0.025 sec)

MariaDB [supplier]> insert into CATALOGUE VALUES(10001,20003,30);
Query OK, 1 row affected (0.084 sec)

MariaDB [supplier]> insert into CATALOGUE VALUES(10001,20004,10);
Query OK, 1 row affected (0.025 sec)

MariaDB [supplier]> insert into CATALOGUE VALUES(10001,20005,10);
Query OK, 1 row affected (0.037 sec)

MariaDB [supplier]> insert into CATALOGUE VALUES(10002,20001,10);
Query OK, 1 row affected (0.025 sec)

MariaDB [supplier]> insert into CATALOGUE VALUES(10002,20002,20);
Query OK, 1 row affected (0.024 sec)

MariaDB [supplier]> insert into CATALOGUE VALUES(10003,20003,30);
Query OK, 1 row affected (0.024 sec)

MariaDB [supplier]> insert into CATALOGUE VALUES(10004,20003,40);
Query OK, 1 row affected (0.046 sec)

MariaDB [supplier]> select * from SUPPLIERS;
+-----+-----+-----+
| sid | sname | address |
+-----+-----+-----+
| 10001 | Acnewidget | bangalore |
| 10002 | jhons | kolkata |
| 10003 | vimal | mumbai |
| 10004 | reliance | delhi |
+-----+-----+-----+
4 rows in set (0.002 sec)

MariaDB [supplier]> SELECT * FROM PARTS;
+-----+-----+
| id | name |
+-----+-----+
| 20001 | book |
| 20002 | pen |
| 20003 | pencil |
| 20004 | mobile |
| 20005 | charger |
+-----+-----+
5 rows in set (0.002 sec)

```

```
MariaDB [supplier]> SELECT * FROM PARTS;
+-----+-----+-----+
| pid  | pname | color |
+-----+-----+-----+
| 20001 | book  | red   |
| 20002 | pen    | red   |
| 20003 | pencil | green |
| 20004 | mobile | green |
| 20005 | charger | black |
+-----+-----+-----+
5 rows in set (0.002 sec)
```

```
MariaDB [supplier]> SELECT * FROM CATALOGUE;
+-----+-----+-----+
| sid  | pid   | cost  |
+-----+-----+-----+
| 10001 | 20001 | 10    |
| 10001 | 20002 | 10    |
| 10001 | 20003 | 30    |
| 10001 | 20004 | 10    |
| 10001 | 20005 | 10    |
| 10002 | 20001 | 10    |
| 10002 | 20002 | 20    |
| 10003 | 20003 | 30    |
| 10004 | 20003 | 40    |
+-----+-----+-----+
9 rows in set (0.002 sec)
```

```
MariaDB [supplier]> SELECT pname FROM PARTS,CATALOGUE WHERE CATALOGUE.pid=PARTS.pid AND CATALOGUE.sid IS NOT NU  
LL;  
+-----+  
| pname |  
+-----+  
| book |  
| pen |  
| pencil |  
| mobile |  
| charger |  
| book |  
| pen |  
| pencil |  
| pencil |  
+-----+  
9 rows in set (0.047 sec)
```

```
MariaDB [supplier]> SELECT S.sname FROM SUPPLIERS S WHERE NOT EXISTS((SELECT P.pid FROM PARTS P ) EXCEPT (SELEC  
T C.pid FROM CATALOGUE C WHERE C.sid = S.sid));  
+-----+  
| sname |  
+-----+  
| Acmewidget |  
+-----+  
1 row in set (0.029 sec)  
  
MariaDB [supplier]> SELECT S.sname FROM SUPPLIERS S WHERE NOT EXISTS (( SELECT P.pid FROM PARTS P WHERE P.col  
r = 'Red') EXCEPT ( SELECT C.pid FROM CATALOGUE C, PARTS P WHERE C.sid = S.sid AND C.pid = P.pid AND P.color =  
'Red' ));  
+-----+  
| sname |  
+-----+  
| Acmewidget |  
| jhons |  
+-----+  
2 rows in set (0.017 sec)
```

```

MariaDB [supplier]> SELECT P.pname FROM PARTS P, CATALOGUE C, SUPPLIERS S WHERE P.pid = C.pid AND C.sid = S.sid
AND S.sname = 'Acmewidget' AND NOT EXISTS ( SELECT *FROM CATALOGUE C1,SUPPLIERS S1 WHERE P.pid = C1.pid AND C1
.sid = S1.sid AND S1.sname<>'Acmewidget');
+-----+
| pname   |
+-----+
| mobile  |
| charger |
+-----+
2 rows in set (0.003 sec)

MariaDB [supplier]> SELECT DISTINCT C.sid FROM CATALOGUE C WHERE C.cost > ( SELECT AVG (C1.cost) FROM CATALOGUE
C1 WHERE C1.pid = C.pid );
+-----+
| sid    |
+-----+
| 10002 |
| 10004 |
+-----+
2 rows in set (0.021 sec)

```

```

MariaDB [supplier]> SELECT P.pid, S.sname FROM PARTS P, SUPPLIERS S, CATALOGUE C WHERE C.pid = P.pid AND C.sid
= S.sid AND C.cost = (SELECT MAX (C1.cost) FROM CATALOGUE C1 WHERE C1.pid = P.pid);
ERROR 1630 (42000): FUNCTION supplier.MAX does not exist. Check the 'Function Name Parsing and Resolution' sect
ion in the Reference Manual
MariaDB [supplier]>
MariaDB [supplier]> SELECT P.pid, S.sname FROM PARTS P, SUPPLIERS S, CATALOGUE C WHERE C.pid = P.pid AND C.sid
= S.sid AND C.cost = (SELECT MAX(C1.cost) FROM CATALOGUE C1 WHERE C1.pid = P.pid);
+-----+-----+
| pid  | sname   |
+-----+-----+
| 20001 | Acmewidget |
| 20004 | Acmewidget |
| 20005 | Acmewidget |
| 20001 | jhons    |
| 20002 | jhons    |
| 20003 | reliance |
+-----+-----+
6 rows in set (0.202 sec)

MariaDB [supplier]> █

```

4) STUDENTFACULTY DATABASE

```
MariaDB [studentfaculty]> create table student
-> (
-> snum integer,
-> sname varchar(30),
-> major varchar(30),
-> lvl varchar(30),
-> age integer,
-> PRIMARY KEY(snum)
-> );
Query OK, 0 rows affected (0.102 sec)

MariaDB [studentfaculty]> create table class
-> (
-> cname varchar(30),
-> meets_at time,
-> room varchar(30),
-> fid integer,
-> PRIMARY KEY(fid,cname)
-> );
Query OK, 0 rows affected (0.252 sec)

MariaDB [studentfaculty]>
MariaDB [studentfaculty]> create table enrolled
-> (
-> snum integer,
-> cname varchar(30),
-> FOREIGN KEY(snum) REFERENCES student(snum)
-> );
Query OK, 0 rows affected (0.191 sec)

MariaDB [studentfaculty]> create table faculty
-> (
-> fid integer,
-> fname varchar(30),
-> deptid integer,
-> FOREIGN KEY (fid) REFERENCES class(fid)
-> );
Query OK, 0 rows affected (0.030 sec)

MariaDB [studentfaculty]>
MariaDB [studentfaculty]> INSERT INTO student VALUES(1,'jhon','CS','Sr',19);
Query OK, 1 row affected (0.227 sec)

MariaDB [studentfaculty]> INSERT INTO student VALUES(2,'smith','CS','Jr',20);
Query OK, 1 row affected (0.002 sec)

MariaDB [studentfaculty]> INSERT INTO student VALUES(3,'jacob','CV','Sr',20);
Query OK, 1 row affected (0.014 sec)

MariaDB [studentfaculty]> INSERT INTO student VALUES(4,'
```

12:25 PM | 0.0KB/s ⏺ ⏹

4G ⏵ 31%

```
MariaDB [studentfaculty]> INSERT INTO student VALUES(4, 'tom', 'CS', 'Jr', 20);
Query OK, 1 row affected (0.002 sec)
```

```
MariaDB [studentfaculty]> INSERT INTO student VALUES(5, 'sid', 'CS', 'Jr', 20);
Query OK, 1 row affected (0.003 sec)
```

```
MariaDB [studentfaculty]> INSERT INTO student VALUES(6, 'harry', 'CS', 'Sr', 21);
Query OK, 1 row affected (0.006 sec)
```

12:26 PM | 505KB/s ⌂ 4G 30%

```
Query OK, 8 rows affected (0.009 sec)

MariaDB [studentfaculty]> INSERT INTO class VALUES('class1','18:23:22','room1',14);
Query OK, 1 row affected (0.135 sec)

MariaDB [studentfaculty]> INSERT INTO class VALUES('class10','15:44:22','room128',13);
Query OK, 1 row affected (0.004 sec)

MariaDB [studentfaculty]> INSERT INTO class VALUES('class2','18:23:22','room2',12);
Query OK, 1 row affected (0.007 sec)

MariaDB [studentfaculty]> INSERT INTO class VALUES('class3','16:45:14','room3',11);
Query OK, 1 row affected (0.013 sec)

MariaDB [studentfaculty]> INSERT INTO class VALUES('class4','10:08:01','room4',14);
Query OK, 1 row affected (0.002 sec)

MariaDB [studentfaculty]> INSERT INTO class VALUES('class5','11:44:12','room3',15);
Query OK, 1 row affected (0.009 sec)

MariaDB [studentfaculty]> INSERT INTO class VALUES('class6','05:44:12','room2',14);
Query OK, 1 row affected (0.002 sec)

MariaDB [studentfaculty]> INSERT INTO class VALUES('class7','06:12:11','room3',14);
Query OK, 1 row affected (0.007 sec)

MariaDB [studentfaculty]> INSERT INTO faculty VALUES(11,'Harshith',1000);
Query OK, 1 row affected (0.006 sec)

MariaDB [studentfaculty]>
MariaDB [studentfaculty]> INSERT INTO faculty VALUES(12,'Mohan',1000);
Query OK, 1 row affected (0.002 sec)

MariaDB [studentfaculty]>
MariaDB [studentfaculty]> INSERT INTO faculty VALUES(13,'Kumar',1001);
Query OK, 1 row affected (0.002 sec)

MariaDB [studentfaculty]>
MariaDB [studentfaculty]> INSERT INTO faculty VALUES(14,'Shobha',1002);
Query OK, 1 row affected (0.007 sec)

MariaDB [studentfaculty]>
```

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■ ○ ◀

```
Query OK, 1 row affected (0.006 sec)

MariaDB [studentfaculty]> INSERT INTO enrolled VALUES(1,
'class1');
Query OK, 1 row affected (0.020 sec)

MariaDB [studentfaculty]> INSERT INTO enrolled VALUES(2,
'class1');
Query OK, 1 row affected (0.007 sec)

MariaDB [studentfaculty]> INSERT INTO enrolled VALUES(3,
'class3');
Query OK, 1 row affected (0.009 sec)

MariaDB [studentfaculty]> INSERT INTO enrolled VALUES(4,
'class3');
Query OK, 1 row affected (0.008 sec)

MariaDB [studentfaculty]> INSERT INTO enrolled VALUES(3,
'class3');
Query OK, 1 row affected (0.004 sec)

MariaDB [studentfaculty]> INSERT INTO enrolled VALUES(5,
'class4');
Query OK, 1 row affected (0.006 sec)

MariaDB [studentfaculty]> INSERT INTO enrolled VALUES(1,
'class5');
Query OK, 1 row affected (0.002 sec)

MariaDB [studentfaculty]> INSERT INTO enrolled VALUES(2,
'class5');
Query OK, 1 row affected (0.001 sec)

MariaDB [studentfaculty]> INSERT INTO enrolled VALUES(3,
'class5');
Query OK, 1 row affected (0.002 sec)

MariaDB [studentfaculty]> INSERT INTO enrolled VALUES(4,
'class5');
Query OK, 1 row affected (0.002 sec)

MariaDB [studentfaculty]> INSERT INTO enrolled VALUES(5,
'class5');
Query OK, 1 row affected (0.002 sec)

MariaDB [studentfaculty]> INSERT INTO enrolled VALUES(6,
'class5');
Query OK, 1 row affected (0.003 sec)
```

12:26 PM | 0.0KB/s ⚡ ⚡

4G ⚡ 31

```
MariaDB [studentfaculty]> select * from student;
```

snum	sname	major	lvl	age
1	jhon	CS	Sr	19
2	smith	CS	Jr	20
3	jacob	CV	Sr	20
4	tom	CS	Jr	20
5	sid	CS	Jr	20
6	harry	CS	Sr	21

6 rows in set (0.023 sec)

```
MariaDB [studentfaculty]> select * from class;
```

cname	meets_at	room	fid
class3	16:45:14	room3	11
class2	18:23:22	room2	12
class10	15:44:22	room128	13
class1	18:23:22	room1	14
class4	10:08:01	room4	14
class6	05:44:12	room2	14
class7	06:12:11	room3	14
class5	11:44:12	room3	15

8 rows in set (0.008 sec)

```
MariaDB [studentfaculty]> select * from enrolled;
```

snum	cname
1	class1
2	class1
3	class3
4	class3
3	class3
5	class4
1	class5
2	class5
3	class5
4	class5
5	class5
6	class5

12 rows in set (0.002 sec)

```
MariaDB [studentfaculty]> select * from faculty;
+----+-----+-----+
| fid | fname | deptid |
+----+-----+-----+
| 11 | Harshith | 1000 |
| 12 | Mohan | 1000 |
| 13 | Kumar | 1001 |
| 14 | Shobha | 1002 |
| 15 | Shan | 1000 |
+----+-----+-----+
5 rows in set (0.004 sec)
```

```
MariaDB [studentfaculty]> SELECT DISTINCT s.sname
-> FROM student s,class c,faculty f,enrolled e
-> WHERE s.snum=e.snum      AND
->       e cname=c cname    AND
->       s level='jr'      AND
->       f fname='Harshith' AND
->       f fid=c fid;
ERROR 1054 (42S22): Unknown column 's.level' in 'where clause'
MariaDB [studentfaculty]> SELECT DISTINCT s.sname
-> FROM student s,class c,faculty f,enrolled e
-> WHERE s.snum=e.snum      AND
->       e cname=c cname    AND
->       s lvl='Jr'         AND
->       f fname='Harshith' AND
->       f fid=c fid;
+-----+
| sname |
+-----+
| tom   |
+-----+
1 row in set (0.164 sec)

MariaDB [studentfaculty]> SELECT DISTINCT cname
-> FROM class
-> WHERE room='room128'
-> OR
-> cname IN (SELECT e cname FROM enrolled e GROUP BY
e cname HAVING COUNT(*)>=5);
+-----+
| cname |
+-----+
| class10 |
| class5  |
+-----+
2 rows in set (0.031 sec)
```

```
MariaDB [studentfaculty]> select DISTINCT s.sname
-> from student s
-> where s.snum in (SELECT e1.snum from enrolled e1,
enrolled e2, class c1, class
-> c2 where e1.snum = e2.snum and e1 cname <> e2.cna
me and e1 cname =
-> c1 cname and e2 cname = c2 cname and c1.meets_at
= c2.meets_at);
Empty set (0.151 sec)
```

Database changed

```
MariaDB [studentfaculty]> SELECT f.fname,f.fid FROM facu
lty f WHERE f.fid in (SELECT fid FROM class GROUP BY fid
 HAVING COUNT(*)=(SELECT COUNT(DISTINCT room) FROM class
));
Empty set (0.095 sec)
```

```
-> WHERE c cname = e cname GROUP BY c cname HAVING  
COUNT(c cname) < 5 );  
+-----+  
| fname |  
+-----+  
| Harshith |  
| Shobha |  
+-----+  
2 rows in set (0.003 sec)
```

```
MariaDB [studentfaculty]>
```

```
MariaDB [studentfaculty]> select s.age,s.lvl from student s group by s.age having s.lvl in
-> (select s1.lvl from student s1 where s1.age = s.age group by s1.age having count(*) >=
-> all (select s2.lvl from student s2 where s2.age = s1.age group by s2.age));
+-----+-----+
| age | lvl |
+-----+-----+
| 19 | Sr  |
| 20 | Jr  |
| 21 | Sr  |
+-----+-----+
3 rows in set, 6 warnings (0.154 sec)
```

```
MariaDB [studentfaculty]>
MariaDB [studentfaculty]> SELECT DISTINCT S.sname
-> FROM student S
-> WHERE S.snum NOT IN (SELECT E.snum
-> FROM enrolled E );
Empty set (0.166 sec)
```


5) AIRLINE DATABASE

```
MariaDB [airline]> CREATE TABLE flight(
->     no INT,
->     frm VARCHAR(20),
->     too VARCHAR(20),
->     distance INT,
->     departs VARCHAR(20),
->     arrives VARCHAR(20),
->     price REAL,
->     PRIMARY KEY (no) );
Query OK, 0 rows affected (0.023 sec)

MariaDB [airline]> CREATE TABLE aircraft(
->     aid INT,
->     aname VARCHAR(20),
->     cruisingrange INT,
->     PRIMARY KEY (aid) );
Query OK, 0 rows affected (0.014 sec)

MariaDB [airline]> CREATE TABLE employees(
->     eid INT,
->     ename VARCHAR(20),
->     salary INT,
->     PRIMARY KEY (eid) );
Query OK, 0 rows affected (0.032 sec)

MariaDB [airline]> CREATE TABLE certified(
->     eid INT,
->     aid INT,
->     PRIMARY KEY (eid,aid),
->     FOREIGN KEY (eid) REFERENCES employees (eid),
->     FOREIGN KEY (aid) REFERENCES aircraft (aid) );
Query OK, 0 rows affected (0.030 sec)

MariaDB [airline]> INSERT INTO flight (no,frm,too,distance,departs,arrives,price) VALUES
->     (1,'Bangalore','Mangalore',360,'10:45:00','12:00:00',10000),
->     (2,'Bangalore','Delhi',5000,'12:15:00','04:30:00',25000),
->     (3,'Bangalore','Mumbai',3500,'02:15:00','05:25:00',30000),
->     (4,'Delhi','Mumbai',4500,'10:15:00','12:05:00',35000),
->     (5,'Delhi','Frankfurt',18000,'07:15:00','05:30:00',90000),
->     (6,'Bangalore','Frankfurt',19500,'10:00:00','07:45:00',95000),
->     (7,'Bangalore','Frankfurt',17000,'12:00:00','06:30:00',99000);
Query OK, 7 rows affected (0.131 sec)
Records: 7  Duplicates: 0  Warnings: 0
```

```
MariaDB [airline]> INSERT INTO aircraft (aid,aname,cruis
ingrange) values
->          (123,'Airbus',1000),
->          (302,'Boeing',5000),
->          (306,'Jet01',5000),
->          (378,'Airbus380',8000),
->          (456,'Aircraft',500),
->          (789,'Aircraft02',800),
->          (951,'Aircraft03',1000);
Query OK, 7 rows affected (0.010 sec)
Records: 7  Duplicates: 0  Warnings: 0
```

```
MariaDB [airline]> INSERT INTO employees (eid,ename,sala
ry) VALUES
->          (1,'Ajay',30000),
->          (2,'Ajith',85000),
->          (3,'Arnab',50000),
->          (4,'Harry',45000),
->          (5,'Ron',90000),
->          (6,'Josh',75000),
->          (7,'Ram',100000);
Query OK, 7 rows affected (0.006 sec)
Records: 7  Duplicates: 0  Warnings: 0
```

```
MariaDB [airline]> INSERT INTO certified (eid,aid) VALUE
S
->          (1,123),
->          (2,123),
->          (1,302),
->          (5,302),
->          (7,302),
->          (1,306),
->          (2,306),
->          (1,378),
->          (2,378),
->          (4,378),
->          (6,456),
->          (3,456),
->          (5,789),
->          (6,789),
->          (3,951),
->          (1,951),
->          (1,789);
Query OK, 17 rows affected (0.019 sec)
Records: 17  Duplicates: 0  Warnings: 0
```

```
MariaDB [airline]> select * from flight;
+----+-----+-----+-----+-----+-----+
| no | frm      | too      | distance | departs | arrives | price |
+----+-----+-----+-----+-----+-----+
| 1  | Bangalore | Mangalore |      360 | 10:45:00 | 12:00:00 | 10000 |
| 2  | Bangalore | Delhi     |    5000 | 12:15:00 | 04:30:00 | 25000 |
| 3  | Bangalore | Mumbai   |   3500 | 02:15:00 | 05:25:00 | 30000 |
| 4  | Delhi     | Mumbai   |   4500 | 10:15:00 | 12:05:00 | 35000 |
| 5  | Delhi     | Frankfurt | 18000 | 07:15:00 | 05:30:00 | 90000 |
| 6  | Bangalore | Frankfurt | 19500 | 10:00:00 | 07:45:00 | 95000 |
| 7  | Bangalore | Frankfurt | 17000 | 12:00:00 | 06:30:00 | 99000 |
+----+-----+-----+-----+-----+-----+
7 rows in set (0.167 sec)
```

```
MariaDB [airline]> select * from aircraft;
+-----+-----+-----+
| aid | aname      | cruisingrange |
+-----+-----+-----+
| 123 | Airbus     |          1000 |
| 302 | Boeing     |          5000 |
| 306 | Jet01      |          5000 |
| 378 | Airbus380  |         8000 |
| 456 | Aircraft   |          500 |
| 789 | Aircraft02 |          800 |
| 951 | Aircraft03 |          1000 |
+-----+-----+-----+
7 rows in set (0.018 sec)

MariaDB [airline]> select * from employees;
+-----+-----+-----+
| eid | ename    | salary |
+-----+-----+-----+
| 1   | Ajay     | 30000 |
| 2   | Ajith    | 85000 |
| 3   | Arnab    | 50000 |
| 4   | Harry    | 45000 |
| 5   | Ron      | 90000 |
| 6   | Josh     | 75000 |
| 7   | Ram      | 100000 |
+-----+-----+-----+
7 rows in set (0.013 sec)

MariaDB [airline]> select * from certified;
+-----+-----+
| eid | aid  |
+-----+-----+
| 1   | 123  |
| 1   | 302  |
| 1   | 306  |
| 1   | 378  |
| 1   | 789  |
| 1   | 951  |
| 2   | 123  |
| 2   | 306  |
| 2   | 378  |
| 3   | 456  |
| 3   | 951  |
| 4   | 378  |
| 5   | 302  |
| 5   | 789  |
| 6   | 456  |
| 6   | 789  |
| 7   | 302  |
+-----+-----+
17 rows in set (0.019 sec)
```

```
MariaDB [airline]> SELECT DISTINCT a.aname
    ->      FROM aircraft a,certified c,employees e
    ->      WHERE a.aid=c.aid
    ->      AND c.eid=e.eid
    ->      AND NOT EXISTS
    ->          (SELECT *
    ->              FROM employees e1
    ->             WHERE e1.eid=e.eid
    ->              AND e1.salary<80000);
+-----+
| aname   |
+-----+
| Airbus  |
| Boeing  |
| Jet01   |
| Airbus380|
| Aircraft02|
+-----+
```

5 rows in set (0.061 sec)

```
MariaDB [airline]> SELECT c.eid,MAX(cruisingrange)
    ->      FROM certified c,aircraft a
    ->      WHERE c.aid=a.aid
    ->      GROUP BY c.eid
    ->      HAVING COUNT(*)>3;
+-----+
| eid | MAX(cruisingrange) |
+-----+
| 1  |           8000 |
```

1 row in set (0.038 sec)

```
MariaDB [airline]> SELECT DISTINCT e.ename
    ->      FROM employees e
    ->      WHERE e.salary<
    ->          (SELECT MIN(f.price)
    ->              FROM flight f
    ->             WHERE f.frm='Bangalore'
    ->               AND f.too='Frankfurt');
+-----+
| ename   |
+-----+
```

```
| Ajay    |
| Ajith   |
| Arnab   |
| Harry   |
| Ron     |
| Josh    |
+-----+
```

6 rows in set (0.031 sec)

```
MariaDB [airline]> SELECT a.aid,a.aname,AVG(e.salary)
->      FROM aircraft a,certified c,employees e
->      WHERE a.aid=c.aid
->      AND c.eid=e.eid
->      AND a.cruisingrange>1000
->
->      GROUP BY a.aid,a.aname;
```

aid	aname	AVG(e.salary)
302	Boeing	73333.3333
306	Jet01	57500.0000
378	Airbus380	53333.3333

```
3 rows in set (0.012 sec)
```

```
MariaDB [airline]> SELECT distinct e.ename
->      FROM employees e,aircraft a,certified c
->      WHERE e.eid=c.eid
->      AND c.aid=a.aid
->      AND a.aname='Boeing' ;
```

ename
Ajay
Ron
Ram

```
3 rows in set (0.003 sec)
```

```
MariaDB [airline]> select fname from aircraft where cruisingrange > any (select distance from flight where frm='Bangalore' and too='Delhi');
+-----+
| fname   |
+-----+
| Airbus380 |
+-----+
1 row in set (0.020 sec)
```

```
MariaDB [airline]> SELECT F.departs
-> FROM flight F
-> WHERE F.no IN ( ( SELECT F0.no
->   FROM flight F0
->   WHERE F0.frm = 'Bangalore' AND F0.too= 'Kolkata'
->     AND extract(hour from F0.arrives) < 18 )
-> UNION
-> ( SELECT F0.no
->   FROM flight F0, flight F1
->   WHERE F0.frm= 'Bangalore' AND F0.too<> 'Kolkata'
->     AND F0.too= F1.frm AND F1.too = 'Kolkata'
->     AND F1.departs > F0.arrives
->     AND extract(hour from F1.arrives) < 18)
-> UNION
-> ( SELECT F0.no
->   FROM flight F0, flight F1, flight F2
->   WHERE F0.frm = 'Bangalore'
->     AND F0.too = F1.frm
->     AND F1.too = F2.frm
->     AND F2.too = 'Kolkata'
->     AND F0.too <> 'Kolkata'
->     AND F1.too <> 'Kolkata'
->     AND F1.departs > F0.arrives
->     AND F2.departs > F1.arrives
->     AND extract(hour from F2.arrives) < 18));
Empty set (0.065 sec)
```


6) ORDERPROCESSING DATABASE

```
MariaDB [orderprocessing]> create table Salesman(
-> salesman_id int not null,
-> salesman_name varchar(20) not null,
-> city varchar(20) not null,
-> commission int not null,
-> primary key(salesman_id)
-> );
Query OK, 0 rows affected (0.097 sec)

MariaDB [orderprocessing]> create table Customer(
-> customer_id int not null,
-> customer_name varchar(20) not null,
-> city varchar(20) not null,
-> grade int not null,
-> salesman_id int,
-> primary key(customer_id),
-> foreign key(salesman_id) references Salesman(sale
sman_id) on delete set
-> null
-> );
Query OK, 0 rows affected (0.015 sec)

MariaDB [orderprocessing]> create table Orders(
-> order_id int not null,
-> purchase_amt int not null,
-> order_date date not null,
-> customer_id int not null,
-> salesman_id int,
-> primary key(order_id),
-> foreign key(customer_id) references Customer(cust
omer_id),
-> foreign key(salesman_id) references Salesman(sale
sman_id) on delete set
-> null
-> );
Query OK, 0 rows affected (0.018 sec)

MariaDB [orderprocessing]> insert into Salesman(salesman
_id,salesman_name,city,commission)
-> values (1000,'John','Bangalore',25),
-> (2000,'Ravi','Bangalore',20),
-> (3000,'Kumar','Mysore',15),
-> (4000,'Smith','Delhi',30),
-> (5000,'Harsha','Hyderabad',15);
Query OK, 5 rows affected (0.047 sec)
Records: 5  Duplicates: 0  Warnings: 0

MariaDB [orderprocessing]> insert into Customer(customer
_id,customer_name,city,grade,salesman_id)
-> values (10,'Preethi','Bangalore',100,1000),
-> (11,'Vivek','Mangalore',300,1000),
-> (12,'Bhaskar','Chennai',400,2000),
-> (13,'Chethan','Bangalore',200,2000),
```

```
-> (14, 'Mamatha', 'Bangalore', 400, 3000);
Query OK, 5 rows affected (0.006 sec)
Records: 5  Duplicates: 0  Warnings: 0
```

```
MariaDB [orderprocessing]> insert into Orders(order_id,p
urchase_amt,order_date,customer_id,salesman_id)
-> values (50,5000,'2017-05-04',10,1000),
-> (51,4500,'2017-01-20',10,2000),
-> (52,1000,'2017-02-24',13,2000),
-> (53,3500,'2017-04-13',14,3000),
-> (54,5500,'2017-03-09',12,2000);
Query OK, 5 rows affected (0.006 sec)
Records: 5  Duplicates: 0  Warnings: 0
```

```
MariaDB [orderprocessing]> select * from Salesman;
+-----+-----+-----+-----+
| salesman_id | salesman_name | city      | commission |
+-----+-----+-----+-----+
|    1000 | John          | Bangalore | 25        |
|    2000 | Ravi          | Bangalore | 20        |
|    3000 | Kumar         | Mysore    | 15        |
|    4000 | Smith         | Delhi     | 30        |
|    5000 | Harsha        | Hyderabad | 15        |
+-----+-----+-----+-----+
5 rows in set (0.003 sec)
```

```
MariaDB [orderprocessing]> select * from Customer;
+-----+-----+-----+-----+
| customer_id | customer_name | city      | grade | sale
sman_id |
+-----+-----+-----+-----+
|    1000 | 10 | Preethi       | Bangalore | 100 |
|    1000 | 11 | Vivek         | Mangalore | 300 |
|    1000 | 12 | Bhaskar        | Chennai   | 400 |
|    2000 | 13 | Chethan        | Bangalore | 200 |
|    2000 | 14 | Mamatha        | Bangalore | 400 |
|    3000 |           |             |          |      |
+-----+-----+-----+-----+
5 rows in set (0.002 sec)
```

```

MariaDB [orderprocessing]> select * from Orders;
+-----+-----+-----+-----+
| order_id | purchase_amt | order_date | customer_id | salesman_id |
+-----+-----+-----+-----+
|      50 |      5000 | 2017-05-04 |          10 |
|    1000 |        450 | 2017-01-20 |          10 |
|      51 |      1000 | 2017-02-24 |          13 |
|    2000 |      3500 | 2017-04-13 |          14 |
|    2000 |       550 | 2017-03-09 |          12 |
|      53 |      3000 |            |            |
|      54 |            |            |            |
|    2000 |            |            |            |
+-----+-----+-----+-----+
5 rows in set (0.012 sec)

MariaDB [orderprocessing]>
MariaDB [orderprocessing]> select count(customer_name) f
rom Customer where grade > (select avg(grade)
-> from Customer where city = 'Bangalore');
+-----+
| count(customer_name) |
+-----+
|            3 |
+-----+
1 row in set (0.069 sec)

MariaDB [orderprocessing]> select distinct c.salesman_id
,s.salesman_name from Customer c,Salesman s
-> where c.salesman_id = s.salesman_id
-> and 1 < (select count(customer_id) from Customer
where salesman_id =
-> c.salesman_id);
+-----+-----+
| salesman_id | salesman_name |
+-----+-----+
|      1000 |   John           |
|      2000 |   Ravi           |
+-----+-----+
2 rows in set (0.027 sec)

```

```
MariaDB [orderprocessing]> select s.salesman_name,c.customer_name from Salesman s,Customer c
-> where s.salesman_id = c.salesman_id and c.city =
s.city
-> union
-> select s.salesman_name,'No Match' from Salesman s
,Customer c
-> where s.salesman_id = c.salesman_id and c.city !=
s.city;
+-----+-----+
| salesman_name | customer_name |
+-----+-----+
| John          | Preethi        |
| Ravi          | Chethan        |
| John          | No Match       |
| Ravi          | No Match       |
| Kumar         | No Match       |
+-----+-----+
5 rows in set (0.009 sec)
```

```
MariaDB [orderprocessing]> create view salesman_view as
select o.order_date,salesman_id,sum(o.purchase_amt) from
Orders o group by order_date having sum(purchase_amt) =
(select max(sum(purchase_amt)) from Customer where orde
r_date = o.order_date and salesman_id = o.salesman_id);
Query OK, 0 rows affected (0.091 sec)
```

```
MariaDB [orderprocessing]> Delete from Salesman where salesman_id = 1000; select * from Salesman; select * from Orders;
```

```
Query OK, 1 row affected (0.103 sec)
```

salesman_id	salesman_name	city	commission
2000	Ravi	Bangalore	20
3000	Kumar	Mysore	15
4000	Smith	Delhi	30
5000	Harsha	Hyderabad	15

```
4 rows in set (0.006 sec)
```

order_id	purchase_amt	order_date	customer_id	salesman_id
50	5000	2017-05-04		10
NULL				
51	450	2017-01-20		10
2000				
52	1000	2017-02-24		13
2000				
53	3500	2017-04-13		14
3000				
54	550	2017-03-09		12
2000				

```
5 rows in set (0.001 sec)
```

```
MariaDB [orderprocessing]> █
```

7) BOOK DEALER DATA BASE

```
CREATE TABLE author (
    Authority INT,
    Name VARCHAR(20),
    City VARCHAR(20),
    Country VARCHAR(20),
    PRIMARY KEY(author_id));
```

```
CREATE TABLE publisher(
    Publisher_id INT,
    Name VARCHAR(20),
    City VARCHAR(20),
    Country VARCHAR(20),
    PRIMARY KEY(publisher_id));
```

```
CREATE TABLE category (
    Category_id INT,
    Description VARCHAR(30),
    PRIMARY KEY(category_id));
```

```
Create TABLE catalogue(
    Book_id INT,
    Book_title VARCHAR(30),
    Author_id INT,
    Publisher_id INT,
    Category_id INT,
    Year INT,
    Price INT,
    PRIMARY KEY(book_id),
    FOREIGN KEY(author_id) REFERENCES author(author_id),
    FOREIGN KEY(publisher_id) REFERENCES publisher(publisher_id),
    FOREIGN KEY(category_id) REFERENCES category(category_id));
CREATE TABLE orderdetails(
    Order_no INT,
```

```
Book_id INT,  
Quantity INT,  
PRIMARY KEY(order_no),  
FOREIGN KEY(book_id) REFERENCES catalogue(book_id);
```

```
INSERT INTO author1 (author1_id,author1_name,author1_city,author1_country) VALUES
```

```
(1001,'JK Rowling','London','England'),  
(1002,'Chetan Bhagat','Mumbai','India'),  
(1003,'John McCarthy','Chicago','USA'),  
(1004,'Dan Brown','California','USA')
```

```
(1005,'John Green','Berlin','Germany');
```

```
INSERT INTO publisher (publisher_id,name,city,country) VALUES
```

```
(2001,'Bloomsbury','London','England'),  
(2002,'Scholastic','Washington','USA'),  
(2003,'Pearson','London','England'),  
(2004,'Rupa','Delhi','India'),
```

```
(2005,'stefan','Berlin','Germany');
```

```
Insert INTO category (category_id,description) VALUES
```

```
(3001,'Fiction'),
```

```
(3002,'Non-Fiction'),
```

```
(3003,'thriller'),
```

```
(3004,'action'),
```

```
(3005,'fiction') ;
```

```
INSERT INTO catalogue (book_id,book_title,author_id,publisher_id,category_id,year,price) VALUES  
(4001,'HP and Goblet Of Fire',1001,2001,3001,2002,600),
```

```
(4002,'HP and Order Of Phoenix',1001,2002,3001,2005,650),
```

```
(4003,'Two States',1002,2004,3001,2009,65),
```

```
(4004,'3 Mistakes of my life',1002,2004,3001,2007,55),
```

```
(4005,'Da Vinci Code',1004,2003,3001,2004,450),
```

(4006,'Angels and Demons',1004,2003,3001,2003,350),

(4007,'Artificial Intelligence',1003,2002,3002,1970,500);

INSERT INTO orderdetails (order_no,book_id,quantity) VALUES

(5001,4001,5),

(5002,4002,7),

(5003,4003,15),

(5004,4004,11),

(5005,4005,9),

(5006,4006,8),

(5007,4007,2),

(5008,4004,3);

1)

SELECT * FROM author

WHERE author_id IN

(SELECT author_id FROM catalogue WHERE

Year>2000 AND price>

(SELECT AVG(price) FROM catalogue)

GROUP BY author_id HAVING COUNT(*)>1);

2)

SELECT name FROM author a,catalogue c WHERE a.author_id=c.author_id AND book_id IN (SELECT book_id FROM orderdetails WHERE quantity= (SELECT MAX(quantity) FROM orderdetails));

3)

UPDATE catalogue SET price=1.1*price

WHERE publisher_id IN

(SELECT publisher_id FROM publisher WHERE

Name='pearson');

```

MariaDB [book]> select * from author;
+-----+-----+-----+-----+
| author_id | name           | city      | country |
+-----+-----+-----+-----+
| 1001     | JK Rowling       | London    | England  |
| 1002     | Chetan Bhagat    | Mumbai    | India    |
| 1003     | John McCarthy    | Chicago   | USA      |
| 1004     | Dan Brown        | California | USA      |
| 1005     | John Green        | Berlin    | Germany  |
+-----+-----+-----+-----+
5 rows in set (0.004 sec)

MariaDB [book]> select * from publisher;
+-----+-----+-----+-----+
| publisher_id | name           | city      | country |
+-----+-----+-----+-----+
| 2001     | Bloomsbury       | London    | England  |
| 2002     | Scholastic       | Washington | USA      |
| 2003     | Pearson          | London    | England  |
| 2004     | Rupa             | Delhi    | India    |
| 2005     | stefan           | Berlin    | Germany  |
+-----+-----+-----+-----+
5 rows in set (0.001 sec)

MariaDB [book]> select * from category;
+-----+-----+
| category_id | description |
+-----+-----+
| 3001     | Fiction        |
| 3002     | Non-Fiction    |
| 3003     | thriller        |
| 3004     | action          |
| 3005     | fiction          |
+-----+-----+
5 rows in set (0.002 sec)

MariaDB [book]> select * from catalogue;
+-----+-----+-----+-----+
| book_id | book_title           | author_id | publisher_id |
| category_id | year | price |
+-----+-----+-----+-----+
| 4001     | HP and Goblet Of Fire | 1001    | 2001 |
| 3001     | 2002 | 600 |
| 4002     | HP and Order Of Phoenix | 1001    | 2002 |
| 3001     | 2005 | 650 |
| 4003     | Two States           | 1002    | 2004 |
| 3001     | 2009 | 65 |
| 4004     | 3 Mistakes of my life | 1002    | 2004 |
| 3001     | 2007 | 55 |
| 4005     | Da Vinci Code         | 1004    | 2003 |
| 3001     | 2004 | 495 |
| 4006     | Angels and Demons    | 1004    | 2006 |
+-----+-----+-----+-----+

```

```
MariaDB [book]> SELECT * FROM author
->           WHERE author_id IN
->           (SELECT author_id FROM catalogue WHERE
->           year>2000 AND price>
->           (SELECT AVG(price) FROM catalogue)
->           GROUP BY author_id HAVING COUNT(*)>1);
+-----+-----+-----+
| author_id | name      | city     | country   |
+-----+-----+-----+
|      1001 | JK Rowling | London   | England   |
+-----+-----+-----+
1 row in set (0.129 sec)
```

```
MariaDB [book]> SELECT name FROM author a,catalogue c WHERE a.author_id=c.author_id AND book_id IN (SELECT book_id FROM orderdetails WHERE quantity= (SELECT MAX(quantity) FROM orderdetails));
+-----+
| name      |
+-----+
| Chetan Bhagat |
+-----+
1 row in set (0.004 sec)
```

```
MariaDB [book]> UPDATE catalogue SET price=1.1*price
->           WHERE publisher_id IN
->           (SELECT publisher_id FROM publisher WHERE
->           name='pearson');
Query OK, 2 rows affected (0.007 sec)
Rows matched: 2  Changed: 2  Warnings: 0
```

```
MariaDB [book]> select * from catalogue;
```

book_id	book_title	author_id	publis
category_id	year	price	
4001	HP and Goblet Of Fire	1001	
2001	3001 2002 600		
4002	HP and Order Of Phoenix	1001	
2002	3001 2005 650		
4003	Two States	1002	
2004	3001 2009 65		
4004	3 Mistakes of my life	1002	
2004	3001 2007 55		
4005	Da Vinci Code	1004	
2003	3001 2004 495		
4006	Angels and Demons	1004	
2003	3001 2003 385		
4007	Artificial Intelligence	1003	
2002	3002 1970 500		

```
7 rows in set (0.143 sec)
```

8) STUDENT ENROLLMENT DATABASE

1)

```
CREATE TABLE student(  
    Regno VARCHAR(15),  
    Name VARCHAR(20),  
    Major VARCHAR(20),  
    Bdate DATE,  
    PRIMARY KEY (regno) );
```

```
CREATE TABLE course(  
    Courseno INT,  
    Cname VARCHAR(20),  
    Dept VARCHAR(20),  
    PRIMARY KEY (courseno) );
```

```
CREATE TABLE enroll(  
    Regno VARCHAR(15),  
    Courseno INT,  
    Sem INT(3),  
    Marks INT(4),  
    PRIMARY KEY (regno,courseno),  
    FOREIGN KEY (regno) REFERENCES student (regno),  
    FOREIGN KEY (courseno) REFERENCES course (courseno) );
```

```
CREATE TABLE text(
    Book_isbn INT(5),
    Book_title VARCHAR(20),
    Publisher VARCHAR(20),
    Author VARCHAR(20),
    PRIMARY KEY (book_isbn));
```

```
CREATE TABLE book_adoption(
    Courseno INT,
    Sem INT(3),
    Book_isbn INT(5),
    PRIMARY KEY (courseno,book_isbn),
    FOREIGN KEY (courseno) REFERENCES course (courseno),
    FOREIGN KEY (book_isbn) REFERENCES text(book_isbn));
```

2)

```
INSERT INTO student (regno,name,major,bdate) VALUES
('1pe11cs001','a','sr',19931230);
('1pe11cs002','b','sr',19930924),
('1pe11cs003','c','sr',19931127),
('1pe11cs004','d','sr',19930413),
('1pe11cs005','e','jr',19940824);
```

```
INSERT INTO course VALUES (111,'OS','CSE'),
(112,'EC','CSE'),
(113,'SS','ISE'),
(114,'DBMS','CSE'),
(115,'SIGNALS','ECE');
```

```
INSERT INTO text VALUES
(10,'DATABASE SYSTEMS','PEARSON','SCHIELD'),
```

(900,'OPERATING SYS','PEARSON','LELAND'),
(901,'CIRCUITS','HALL INDIA','BOB'),
(902,'SYSTEM SOFTWARE','PETERSON','JACOB'),
(903,'SCHEDULING','PEARSON','PATIL'),
(904,'DATABASE SYSTEMS','PEARSON','JACOB'),
(905,'DATABASE MANAGER','PEARSON','BOB'),
(906,'SIGNALS','HALL INDIA','SUMIT');

INSERT INTO enroll (regno,courseno,sem,marks) VALUES ('1pe11cs001',115,3,100),
(‘1pe11cs002’,114,5,100),
(‘1pe11cs003’,113,5,100),
(‘1pe11cs004’,111,5,100),
(‘1pe11cs005’,112,3,100);

INSERT INTO book_adoption (courseno,sem,book_isbn) VALUES
(111,5,900),
(111,5,903),
(111,5,904),
(112,3,901),
(113,3,10),
(114,5,905),
(113,5,902),
(115,3,906);

3)

Insert into text values(907,'SCHEMA DIAGRAMS','HALL INDIA','RICHARD');

Insert into book_adoption values(114,4,907);

4)

```
SELECT c.courseno,t.book_isbn,t.book_title
  FROM course c,book_adoption ba,text t
 WHERE c.courseno=ba.courseno
   AND ba.book_isbn=t.book_isbn
   AND c.dept='CSE'
  AND 2<(
    SELECT COUNT(book_isbn)
      FROM book_adoption b
     WHERE c.courseno=b.courseno)
 ORDER BY t.book_title;
```

5)

```
SELECT DISTINCT c.dept
  FROM course c
 WHERE c.dept IN
  ( SELECT c.dept
    FROM course c,book_adoption b,text t
   WHERE c.courseno=b.courseno
     AND t.book_isbn=b.book_isbn
     AND t.publisher='PEARSON')
   AND c.dept NOT IN
  (SELECT c.dept
    FROM course c,book_adoption b,text t
   WHERE c.courseno=b.courseno
     AND t.book_isbn=b.book_isbn
     AND t.publisher != 'PEARSON');
```

```
MariaDB [SE]> select * from student;
+-----+-----+-----+-----+
| regno | name | major | bdate |
+-----+-----+-----+-----+
| 1pe11cs001 | a | sr | 1993-12-30 |
| 1pe11cs002 | b | sr | 1993-09-24 |
| 1pe11cs003 | c | sr | 1993-11-27 |
| 1pe11cs004 | d | sr | 1993-04-13 |
| 1pe11cs005 | e | jr | 1994-08-24 |
+-----+-----+-----+-----+
5 rows in set (0.176 sec)
```

```
MariaDB [SE]> select * from enroll;
+-----+-----+-----+-----+
| regno | courseno | sem | marks |
+-----+-----+-----+-----+
| 1pe11cs001 | 115 | 3 | 100 |
| 1pe11cs002 | 114 | 5 | 100 |
| 1pe11cs003 | 113 | 5 | 100 |
| 1pe11cs004 | 111 | 5 | 100 |
| 1pe11cs005 | 112 | 3 | 100 |
+-----+-----+-----+-----+
5 rows in set (0.013 sec)
```

```
MariaDB [SE]> select * from course;
+-----+-----+-----+
| courseno | cname | dept |
+-----+-----+-----+
| 111 | OS | CSE |
| 112 | EC | CSE |
| 113 | SS | ISE |
| 114 | DBMS | CSE |
| 115 | SIGNALS | ECE |
+-----+-----+-----+
5 rows in set (0.010 sec)
```

```
MariaDB [SE]> select * from text;
+-----+-----+-----+-----+
| book_isbn | book_title      | publisher | author   |
+-----+-----+-----+-----+
|    10    | DATABASE SYSTEMS | PEARSON   | SCHIELD |
|  900    | OPERATING SYS   | PEARSON   | LELAND   |
|  901    | CIRCUITS        | HALL INDIA | BOB      |
|  902    | SYSTEM SOFTWARE | PETERSON  | JACOB    |
|  903    | SCHEDULING      | PEARSON   | PATIL    |
|  904    | DATABASE SYSTEMS| PEARSON   | JACOB    |
|  905    | DATABASE MANAGER| PEARSON   | BOB      |
|  906    | SIGNALS          | HALL INDIA | SUMIT    |
+-----+-----+-----+-----+
8 rows in set (0.010 sec)
```

```
MariaDB [SE]> select * from book_adoption;
+-----+-----+-----+
| courseno | sem   | book_isbn |
+-----+-----+-----+
|    111   |    5   |    900   |
|    111   |    5   |    903   |
|    111   |    5   |    904   |
|    112   |    3   |    901   |
|    113   |    3   |     10   |
|    113   |    5   |    902   |
|    114   |    5   |    905   |
|    115   |    3   |    906   |
+-----+-----+-----+
8 rows in set (0.001 sec)
```

```
MariaDB [SE]> insert into text values(907, 'SCHEMA DIAGRAMS', 'HALL INDIA', 'RICHARD');
Query OK, 1 row affected (0.114 sec)
```

```
MariaDB [SE]> insert into book_adoption values(114,4,907);
Query OK, 1 row affected (0.010 sec)
```

```
MariaDB [SE]> select * from text;
```

book_isbn	book_title	publisher	author
10	DATABASE SYSTEMS	PEARSON	SCHIELD
900	OPERATING SYS	PEARSON	LELAND
901	CIRCUITS	HALL INDIA	BOB
902	SYSTEM SOFTWARE	PETERSON	JACOB
903	SCHEDULING	PEARSON	PATIL
904	DATABASE SYSTEMS	PEARSON	JACOB
905	DATABASE MANAGER	PEARSON	BOB
906	SIGNALS	HALL INDIA	SUMIT
907	SCHEMA DIAGRAMS	HALL INDIA	RICHARD

```
9 rows in set (0.002 sec)
```

```
MariaDB [SE]> select * from book_adoption;
```

courseno	sem	book_isbn
111	5	900
111	5	903
111	5	904
112	3	901
113	3	10
113	5	902
114	5	905
114	4	907
115	3	906

```
9 rows in set (0.002 sec)
```

```
MariaDB [SE]> SELECT c.courseno,t.book_isbn,t.book_title  
->      FROM course c,book_adoption ba,text t  
-> WHERE c.courseno=ba.courseno  
-> AND ba.book_isbn=t.book_isbn  
-> AND c.dept='CSE'  
-> AND 2<(   
->   SELECT COUNT(book_isbn)  
->   FROM book_adoption b  
-> WHERE c.courseno=b.courseno)  
-> ORDER BY t.book_title;  
+-----+-----+-----+  
| courseno | book_isbn | book_title |  
+-----+-----+-----+  
|     111  |      904  | DATABASE SYSTEMS |  
|     111  |      900  | OPERATING SYS |  
|     111  |      903  | SCHEDULING    |  
+-----+-----+-----+  
3 rows in set (0.105 sec)
```

```
MariaDB [SE]>  
MariaDB [SE]> SELECT DISTINCT c.dept  
->      FROM course c  
-> WHERE c.dept IN  
->   ( SELECT c.dept  
->      FROM course c,book_adoption b,text t  
-> WHERE c.courseno=b.courseno  
-> AND t.book_isbn=b.book_isbn  
-> AND t.publisher='PEARSON')  
-> AND c.dept NOT IN  
->   (SELECT c.dept  
->      FROM course c,book_adoption b,text t  
-> WHERE c.courseno=b.courseno  
-> AND t.book_isbn=b.book_isbn  
-> AND t.publisher != 'PEARSON');  
Empty set (0.034 sec)
```

9) MOVIE DATABASE

1)

Create TABLE

```
TABLE ACTOR(  
ACTID integer(5),  
ACTNAME VARCHAR(20),  
ACTGENDER CHAR(1),  
PRIMARY KEY (ACTID));
```

```
CREATE TABLE DIRECTOR(  
DIRID integer(3),  
DIRNAME VARCHAR(20),  
DIRPHONE integer(10),  
PRIMARY KEY (DIRID));
```

```
Create TABLE MOVIES(  
MOVID integer(4),  
MOVTITLE VARCHAR(25),  
MOVYEAR integer(4),  
MOVLANG VARCHAR(12),  
DIRID integer(3),  
PRIMARY KEY (MOVID),  
FOREIGN KEY (DIRID) REFERENCES DIRECTOR(DIRID));  
CREATE TABLE MOVIECAST(  
ACTID integer(3),  
MOVID integer(4),  
ROLE VARCHAR(10),  
PRIMARY KEY (ACTID,MOVID),
```

```
FOREIGN KEY (ACTID) REFERENCES ACTOR(ACTID),
FOREIGN KEY (MOVID) REFERENCES MOVIES(MOVID)); Create TABLE RATING(
MOVID integer(3),
REVSTARS VARCHAR(25),
PRIMARY KEY(MOVID),
FOREIGN KEY (MOVID) REFERENCES MOVIES(MOVID));
2)
```

```
INSERT INTO ACTOR VALUES(301,'ANUSHKA','F');
```

```
INSERT INTO ACTOR VALUES(302,'PRABHAS','M')
```

```
INSERT INTO ACTOR VALUES(303,'PUNITH','M');
```

```
INSERT INTO ACTOR VALUES(304,'SUDEEP','M');
```

```
INSERT INTO ACTOR VALUES(305,'AKSHAY','M');
```

```
INSERT INTO DIRECTOR VALUES(60,'RAJAMOULI',919191919);
```

```
INSERT INTO DIRECTOR VALUES(61,'HITCHCOCK',818181818);
```

```
INSERT INTO DIRECTOR VALUES(62,'FARAN',717171717);
```

```
INSERT INTO DIRECTOR VALUES(63,'STEVEN SPIELBERG',616161616);
```

```
INSERT INTO DIRECTOR VALUES(64,'MANIRATHNAM',919191919);
```

```
INSERT INTO MOVIES VALUES(1001,'BAHUBALI-2',2017,'TELUGU',60);
```

```
INSERT INTO MOVIES VALUES(1002,'BAHUBALI-1',2015,'TELUGU',60);
```

```
INSERT INTO MOVIES VALUES(1003,'AKASH',2008,'KANADA',61);
```

```
INSERT INTO MOVIES VALUES(1004,'WAR HORSE',2011,'ENGLISH',63);
```

```
INSERT INTO MOVIES VALUES(1005,'TRAPKING',2017,'ENGLISH',64);
```

```
INSERT INTO MOVIECAST VALUES(301,1002,'HEROINE');
```

```
INSERT INTO MOVIECAST VALUES(301,1001,'HEROINE');
```

```
INSERT INTO MOVIECAST VALUES(303,1003,'HERO');
```

```
INSERT INTO MOVIECAST VALUES(303,1002,'GUEST');
```

```
INSERT INTO MOVIECAST VALUES(304,1004,'HERO');
```

```
INSERT INTO RATING VALUES(1001,4);
```

```
INSERT INTO RATING VALUES(1002,2);
```

```
INSERT INTO RATING VALUES(1003,5);
```

```
INSERT INTO RATING VALUES(1004,4); INSERT  
INTO RATING VALUES(1005,1);
```

3)

```
SELECT MOVTITLE  
FROM MOVIES  
WHERE DIRID IN (SELECT DIRID  
FROM DIRECTOR  
WHERE DIRNAME='HITCHCOCK');
```

4)

```
SELECT MOVTITLE  
FROM MOVIES M,MOVIECAST MV  
WHERE M.MOVID=MV.MOVID AND ACTID IN (SELECT ACTID  
FROM MOVIECAST GROUP BY ACTID  
HAVING COUNT (ACTID)>1)  
GROUP BY MOVTITLE  
HAVING COUNT(*)>1;
```

5)

```
SELECT ACTNAME,MOVTITLE,MOVYEAR  
FROM ACTOR A  
JOIN MOVIECAST C  
ON A.ACTID=C.ACTID  
JOIN MOVIES M  
ON C.MOVID=M.MOVID  
WHERE M.MOVYEAR NOT BETWEEN 2000 AND 2015;
```

6)

```
SELECT MOVTITLE,MAX(REVSTARS)  
FROM MOVIES  
INNER JOIN RATING USING (MOVID)  
GROUP BY MOVTITLE  
HAVING MAX (REVSTARS)>0  
ORDER BY MOVTITLE;
```

7)

UPDATE RATING

SET REVSTARS=5

WHERE MOVID IN (SELECT MOVID FROM MOVIES

WHERE DIRID IN (SELECT DIRID

FROM DIRECTOR

WHERE DIRNAME='STEVEN SPIELBERG');

Select * from RATING;

```
MariaDB [movie]> select * from ACTOR;
```

ACTID	ACTNAME	ACTGENDER
301	ANUSHKA	F
302	PUNITH	M
303	PRABHAS	M
304	SUDEEP	M
305	AKSHAY	M

```
5 rows in set (0.018 sec)
```

```
MariaDB [movie]> SELECT * FROM DIRECTOR;
```

DIRID	DIRNAME	DIRPHONE
60	RAJAMOULI	919191919
61	HITCHCOCK	818181818
62	FARAN	717171717
63	STEVEN SPIELBERG	616161616
64	MANIRATHNAM	919191919

```
5 rows in set (0.013 sec)
```

```
MariaDB [movie]> SELECT * FROM MOVIES;
```

MOVID	MOVTITLE	MOVYEAR	MOVLANG	DIRID
1001	BAHUBALI-2	2017	TELUGU	60
1002	BAHUBALI-1	2015	TELUGU	60
1003	AKASH	2008	KANADA	61
1004	WAR HORSE	2011	ENGLISH	63
1005	TRAPKING	2017	ENGLISH	64

```
5 rows in set (0.002 sec)
```

```
MariaDB [movie]> SELECT * FROM MOVIECAST;
```

ACTID	MOVID	ROLE
301	1001	HEROINE
301	1002	HEROINE
303	1002	GUEST
303	1003	HERO
304	1004	HERO

```
5 rows in set (0.003 sec)
```

```
MariaDB [movie]> SELECT * FROM RATING;
```

MOVID	REVSTARS
1001	4
1002	2
1003	5
1004	4
1005	1

```
5 rows in set (0.001 sec)
```

```
MariaDB [movie]>
MariaDB [movie]> SELECT MOVTITLE
-> FROM MOVIES
-> WHERE DIRID IN (SELECT DIRID
-> FROM DIRECTOR
-> WHERE DIRNAME='HITCHCOCK');
+-----+
| MOVTITLE |
+-----+
| AKASH    |
+-----+
1 row in set (0.116 sec)
```

```
MariaDB [movie]> SELECT MOVTITLE
-> FROM MOVIES M,MOVIECAST MV
-> WHERE M.MOVID=MV.MOVID AND ACTID IN (SELECT ACTID
-> FROM MOVIECAST GROUP BY ACTID
-> HAVING COUNT (ACTID)>1)
-> GROUP BY MOVTITLE
-> HAVING COUNT(*)>1;
+-----+
| MOVTITLE |
+-----+
| BAHUBALI-1 |
+-----+
1 row in set (0.044 sec)
```

```
MariaDB [movie]>
MariaDB [movie]> SELECT ACTNAME,MOVTITLE,MOVYEAR
-> FROM ACTOR A
-> JOIN MOVIECAST C
-> ON A.ACTID=C.ACTID
-> JOIN MOVIES M
-> ON C.MOVID=M.MOVID
-> WHERE M.MOVYEAR NOT BETWEEN 2000 AND 2015;
+-----+-----+-----+
| ACTNAME | MOVTITLE | MOVYEAR |
+-----+-----+-----+
| ANUSHKA | BAHUBALI-2 | 2017 |
+-----+-----+-----+
1 row in set (0.085 sec)
```

```
MariaDB [movie]> SELECT MOVTITLE,MAX(REVSTARS)
-> FROM MOVIES
-> INNER JOIN RATING USING (MOVID)
-> GROUP BY MOVTITLE
-> HAVING MAX (REVSTARS)>0
-> ORDER BY MOVTITLE;
+-----+-----+
| MOVTITLE | MAX(REVSTARS) |
+-----+-----+
| AKASH     | 5
| BAHUBALI-1 | 2
| BAHUBALI-2 | 4
| TRAPKING   | 1
| WAR HORSE  | 4
+-----+
5 rows in set (0.017 sec)
```

```
MariaDB [movie]> UPDATE RATING
-> SET REVSTARS=5
-> WHERE MOVID IN (SELECT MOVID FROM MOVIES
-> WHERE DIRID IN (SELECT DIRID
-> FROM DIRECTOR
-> WHERE DIRNAME='STEVEN SPIELBERG'));
Query OK, 1 row affected (0.097 sec)
```

Rows matched: 1 Changed: 1 Warnings: 0

```
MariaDB [movie]> select * from rating;
ERROR 1146 (42S02): Table 'movie.rating' doesn't exist
MariaDB [movie]> select * from RATING;
+-----+-----+
| MOVID | REVSTARS |
+-----+-----+
| 1001  | 4
| 1002  | 2
| 1003  | 5
| 1004  | 5
| 1005  | 1
+-----+
5 rows in set (0.002 sec)
```

10) COLLEGE DATABASE

```
CREATE TABLE STUDENT(  
    USN VARCHAR(10) PRIMARY KEY,  
    SNAME VARCHAR(25),  
    ADDRESS VARCHAR(25),  
    PHONE integer(10),  
    GENDER CHAR(1));
```

```
CREATE TABLE SEMSEC(  
    SSID VARCHAR(5) PRIMARY KEY,  
    SEM integer(2),  
    SEC CHAR(1));
```

```
CREATE TABLE CLASS(  
    USN VARCHAR(10),  
    SSID VARCHAR(5),  
    PRIMARY KEY(USN,SSID),  
    FOREIGN KEY(USN) REFERENCES STUDENT(USN),  
    FOREIGN KEY(SSID) REFERENCES SEMSEC(SSID));
```

```
CREATE TABLE SUBJECT(  
    SUBCODE VARCHAR(8),  
    TITLE VARCHAR(20),  
    SEM integer(2),  
    CREDITS integer(2),  
    PRIMARY KEY(SUBCODE));
```

```
CREATE TABLE IAMARKS(  
    USN VARCHAR(10),  
    SUBCODE VARCHAR(8),  
    SSID VARCHAR(5),
```

```
TEST1 integer(2),
TEST2 integer(2),
TEST3 integer(2),
FINALIA integer(2),
PRIMARY KEY(SUBCODE,USN,SSID),
FOREIGN KEY(USN) REFERENCES STUDENT(USN),
FOREIGN KEY(SUBCODE) REFERENCES SUBJECT(SUBCODE),
FOREIGN KEY(SSID) REFERENCES SEMSEC(SSID));
2)
into STUDENT VALUES ('1RN13CS020','AKSHAY','BELAGAVI', 8877881,'M');
INSERT INTO STUDENT VALUES ('1RN13CS062','SANDHYA','BENGALURU',7722829,'F');
INSERT INTO STUDENT VALUES ('1RN13CS091','TEESHA','BENGALURU', 7712312,'F');
INSERT INTO STUDENT VALUES ('1RN13CS066','SUPRIYA','MANGALURU',8877882,'F');
INSERT INTO STUDENT VALUES ('1RN14CS010','ABHAY','BENGALURU', 9900211,'M');
INSERT INTO STUDENT VALUES ('1RN14CS032','BHASKAR','BENGALURU',9923219,'M');
INSERT INTO STUDENT VALUES ('1RN14CS025','ASMI','BENGALURU', 7894737,'F');
INSERT INTO STUDENT VALUES ('1RN15CS011','AJAY','TUMKUR', 9845091,'M');
INSERT INTO STUDENT VALUES ('1RN15CS029','CHITRA','DAVANGERE', 7696772,'F');
INSERT INTO STUDENT VALUES ('1RN15CS045','JEEVA','BELLARY', 9944850,'M');
INSERT INTO STUDENT VALUES ('1RN15CS091','SANTOSH','MANGALURU',8812332,'M');
INSERT INTO STUDENT VALUES ('1RN16CS045','ISMAIL','KALBURGI', 9900232,'M');
INSERT INTO STUDENT VALUES ('1RN16CS088','SAMEERA','SHIMOGA', 9905542,'F');
INSERT INTO STUDENT VALUES ('1RN16CS122','VINAYAKA','CHIKAMAGALUR', 8800880,'M');
INSERT INTO SEMSEC VALUES ('CSE8A', 8,'A');
INSERT INTO SEMSEC VALUES ('CSE8B', 8,'B');
INSERT INTO SEMSEC VALUES ('CSE8C', 8,'C');
INSERT INTO SEMSEC VALUES ('CSE7A', 7,'A');
INSERT INTO SEMSEC VALUES ('CSE7B', 7,'B');
INSERT INTO SEMSEC VALUES ('CSE7C', 7,'C');
INSERT INTO SEMSEC VALUES ('CSE6A', 6,'A');
INSERT INTO SEMSEC VALUES ('CSE6B', 6,'B');
```

```
INSERT INTO SEMSEC VALUES ('CSE6C', 6,'C');
INSERT INTO SEMSEC VALUES ('CSE5A', 5,'A');
INSERT INTO SEMSEC VALUES ('CSE5B', 5,'B'); INSERT
INTO SEMSEC VALUES ('CSE5C', 5,'C');
INSERT INTO SEMSEC VALUES ('CSE4A', 4,'A');
INSERT INTO SEMSEC VALUES ('CSE4B', 4,'B'); INSERT
INTO SEMSEC VALUES ('CSE4C', 4,'C');
INSERT INTO SEMSEC VALUES ('CSE3A', 3,'A');
INSERT INTO SEMSEC VALUES ('CSE3B', 3,'B');
INSERT INTO SEMSEC VALUES ('CSE3C', 3,'C');
INSERT INTO SEMSEC VALUES ('CSE2A', 2,'A');
INSERT INTO SEMSEC VALUES ('CSE2B', 2,'B');
INSERT INTO SEMSEC VALUES ('CSE2C', 2,'C');
INSERT INTO SEMSEC VALUES ('CSE1A', 1,'A');
INSERT INTO SEMSEC VALUES ('CSE1B', 1,'B');
INSERT INTO SEMSEC VALUES ('CSE1C', 1,'C');
INSERT INTO CLASS VALUES ('1RN13CS020','CSE8A');
INSERT INTO CLASS VALUES ('1RN13CS062','CSE8A'); INSERT
INTO CLASS VALUES ('1RN13CS066','CSE8B'); INSERT INTO
CLASS VALUES ('1RN13CS091','CSE8C'); INSERT INTO CLASS
VALUES ('1RN14CS010','CSE7A');
INSERT INTO CLASS VALUES ('1RN14CS025','CSE7A');
INSERT INTO CLASS VALUES ('1RN14CS032','CSE7A');
INSERT INTO CLASS VALUES ('1RN15CS011','CSE4A');
INSERT INTO CLASS VALUES ('1RN15CS029','CSE4A'); INSERT INTO CLASS VALUES
('1RN15CS045','CSE4B'); INSERT INTO CLASS VALUES ('1RN15CS091','CSE4C'); INSERT INTO CLASS
VALUES ('1RN16CS045','CSE3A'); INSERT INTO
CLASS VALUES ('1RN16CS088','CSE3B'); INSERT INTO CLASS VALUES ('1RN16CS122','CSE3C');
INSERT INTO SUBJECT VALUES ('10CS81','ACA', 8, 4);
INSERT INTO SUBJECT VALUES ('10CS82','SSM', 8, 4);
INSERT INTO SUBJECT VALUES ('10CS83','NM', 8, 4);
```

```
INSERT INTO SUBJECT VALUES ('10CS84','CC', 8, 4);
INSERT INTO SUBJECT VALUES ('10CS85','PW', 8, 4);
INSERT INTO SUBJECT VALUES ('10CS71','OOAD', 7, 4);
INSERT INTO SUBJECT VALUES ('10CS72','ECS', 7, 4);
INSERT INTO SUBJECT VALUES ('10CS73','PTW', 7, 4);
INSERT INTO SUBJECT VALUES ('10CS74','DWDM', 7, 4);
INSERT INTO SUBJECT VALUES ('10CS75','JAVA', 7, 4);
INSERT INTO SUBJECT VALUES ('10CS76','SAN', 7, 4);
INSERT INTO SUBJECT VALUES ('15CS51','ME', 5, 4);
INSERT INTO SUBJECT VALUES ('15CS52','CN', 5, 4);
INSERT INTO SUBJECT VALUES ('15CS53','DBMS', 5, 4);
INSERT INTO SUBJECT VALUES ('15CS54','ATC', 5, 4);
INSERT INTO SUBJECT VALUES ('15CS55','JAVA', 5, 3);
INSERT INTO SUBJECT VALUES ('15CS56','AI', 5, 3);
INSERT INTO SUBJECT VALUES ('15CS41','M4', 4, 4);
INSERT INTO SUBJECT VALUES ('15CS42','SE', 4, 4);
INSERT INTO SUBJECT VALUES ('15CS43','DAA', 4, 4);
INSERT INTO SUBJECT VALUES ('15CS44','MPMC', 4, 4);
INSERT INTO SUBJECT VALUES ('15CS45','OOC', 4, 3);
INSERT INTO SUBJECT VALUES ('15CS46','DC', 4, 3);
INSERT INTO SUBJECT VALUES ('15CS31','M3', 3, 4);
INSERT INTO SUBJECT VALUES ('15CS32','ADE', 3, 4); INSERT INTO SUBJECT VALUES
('15CS33','DSA', 3, 4); INSERT INTO SUBJECT VALUES ('15CS34','CO', 3, 4);
INSERT INTO SUBJECT VALUES ('15CS35','USP', 3, 3);
INSERT INTO SUBJECT VALUES ('15CS36','DMS', 3, 3);
INSERT INTO IAMARKS (USN, SUBCODE, SSID, TEST1, TEST2, TEST3) VALUES
('1RN13CS091','10CS81','CSE8C', 15, 16, 18);
INSERT INTO IAMARKS (USN, SUBCODE, SSID, TEST1, TEST2, TEST3) VALUES
('1RN13CS091','10CS82','CSE8C', 12, 19, 14);
INSERT INTO IAMARKS (USN, SUBCODE, SSID, TEST1, TEST2, TEST3) VALUES
('1RN13CS091','10CS83','CSE8C', 19, 15, 20);
```

```
INSERT INTO IAMARKS (USN, SUBCODE, SSID, TEST1, TEST2, TEST3) VALUES  
(‘1RN13CS091’,’10CS84’,’CSE8C’, 20, 16, 19);
```

```
INSERT INTO IAMARKS (USN, SUBCODE, SSID, TEST1, TEST2, TEST3) VALUES  
(‘1RN13CS091’,’10CS85’,’CSE8C’, 15, 15, 12);
```

3)

```
SELECT S.* , SS.SEM, SS.SEC  
FROM STUDENT S, SEMSEC SS, CLASS C  
WHERE S.USN = C.USN AND  
SS.SSID = C.SSID AND  
SS.SEM = 4 AND SS.Sec=’C’;
```

4)

```
SELECT SS.SEM, SS.SEC, S.GENDER, COUNT (S.GENDER) AS COUNT  
FROM STUDENT S, SEMSEC SS, CLASS C  
WHERE S.USN = C.USN AND  
SS.SSID = C.SSID  
GROUP BY SS.SEM, SS.SEC, S.GENDER  
ORDER BY SEM;
```

5)

```
CREATE VIEW STU_TEST1_MARKS_VIEW  
AS  
SELECT TEST1, SUBCODE  
FROM IAMARKS  
WHERE USN = ‘1RN13CS091’;
```

6)

```
update IAMARKS set FINALIA=((TEST1+TEST2+TEST3)-LEAST(TEST1,TEST2,TEST3))/2;
```

7)

```
SELECT S.USN,S.SNAME,S.ADDRESS,S.PHONE,S.GENDER,  
(CASE  
WHEN IA.FINALIA BETWEEN 17 AND 20 THEN ‘OUTSTANDING’
```

```

WHEN IA.FINALIA BETWEEN 12 AND 16 THEN 'AVERAGE'
ELSE 'WEAK'
END) AS CAT

FROM STUDENT S, SEMSEC SS, IAMARKS IA, SUBJECT SUB

WHERE S.USN = IA.USN AND
SS.SSID = IA.SSID AND
SUB.SUBCODE = IA.SUBCODE AND
SUBSEM = 8;

```

```

MariaDB [clg]> select * from CLASS;
+-----+-----+
| USN      | SSID   |
+-----+-----+
| 1RN13CS020 | CSE8A  |
| 1RN13CS062 | CSE8A  |
| 1RN13CS066 | CSE8B  |
| 1RN13CS091 | CSE8C  |
| 1RN14CS010 | CSE7A  |
| 1RN14CS025 | CSE7A  |
| 1RN14CS032 | CSE7A  |
| 1RN15CS011 | CSE4A  |
| 1RN15CS029 | CSE4A  |
| 1RN15CS045 | CSE4B  |
| 1RN15CS091 | CSE4C  |
| 1RN16CS045 | CSE3A  |
| 1RN16CS088 | CSE3B  |
| 1RN16CS122 | CSE3C  |
+-----+-----+
14 rows in set (0.003 sec)

```

```
MariaDB [clg]> SELECT * FROM STUDENT;
+-----+-----+-----+-----+-----+
| USN      | SNAME    | ADDRESS   | PHONE    | GENDER   |
+-----+-----+-----+-----+-----+
| 1RN13CS020 | AKSHAY    | BELAGAVI  | 8877881  | M        |
| 1RN13CS062 | SANDHYA   | BENGALURU | 7722829  | F        |
| 1RN13CS066 | SUPRIYA   | MANGALURU | 8877882  | F        |
| 1RN13CS091 | TEESHA    | BENGALURU | 7712312  | F        |
| 1RN14CS010 | ABHAY     | BENGALURU | 9900211  | M        |
| 1RN14CS025 | ASMI      | BENGALURU | 7894737  | F        |
| 1RN14CS032 | BHASKAR   | BENGALURU | 9923219  | M        |
| 1RN15CS011 | AJAY      | TUMKUR    | 9845091  | M        |
| 1RN15CS029 | CHITRA    | DAVANGERE | 7696772  | F        |
| 1RN15CS045 | JEEVA     | BELLARY   | 9944850  | M        |
| 1RN15CS091 | SANTOSH   | MANGALURU | 8812332  | M        |
| 1RN16CS045 | ISMAIL    | KALBURGI  | 9900232  | M        |
| 1RN16CS088 | SAMEERA   | SHIMOGA   | 9905542  | F        |
| 1RN16CS122 | VINAYAKA  | CHIKAMAGALUR | 8800880 | M        |
+-----+-----+-----+-----+-----+
14 rows in set (0.002 sec)
```

```
MariaDB [clg]> SELECT * FROM IAMARKS;
+-----+-----+-----+-----+-----+-----+-----+
| USN      | SUBCODE  | SSID    | TEST1  | TEST2  | TEST3  | FINALIA |
+-----+-----+-----+-----+-----+-----+-----+
| 1RN13CS091 | 10CS81  | CSE8C   | 15     | 16     | 18     | NULL    |
| 1RN13CS091 | 10CS82  | CSE8C   | 12     | 19     | 14     | NULL    |
| 1RN13CS091 | 10CS83  | CSE8C   | 19     | 15     | 20     | NULL    |
| 1RN13CS091 | 10CS84  | CSE8C   | 20     | 16     | 19     | NULL    |
| 1RN13CS091 | 10CS85  | CSE8C   | 15     | 15     | 12     | NULL    |
+-----+-----+-----+-----+-----+-----+-----+
5 rows in set (0.005 sec)
```

```
MariaDB [clg]> SELECT * FROM SEMSEC;
+-----+-----+-----+
| SSID | SEM | SEC |
+-----+-----+-----+
| CSE1A | 1 | A |
| CSE1B | 1 | B |
| CSE1C | 1 | C |
| CSE2A | 2 | A |
| CSE2B | 2 | B |
| CSE2C | 2 | C |
| CSE3A | 3 | A |
| CSE3B | 3 | B |
| CSE3C | 3 | C |
| CSE4A | 4 | A |
| CSE4B | 4 | B |
| CSE4C | 4 | C |
| CSE5A | 5 | A |
| CSE5B | 5 | B |
| CSE5C | 5 | C |
| CSE6A | 6 | A |
| CSE6B | 6 | B |
| CSE6C | 6 | C |
| CSE7A | 7 | A |
| CSE7B | 7 | B |
| CSE7C | 7 | C |
| CSE8A | 8 | A |
| CSE8B | 8 | B |
| CSE8C | 8 | C |
+-----+-----+-----+
24 rows in set (0.002 sec)
```

```
MariaDB [clg]> SELECT * FROM SUBJECT;
```

SUBCODE	TITLE	SEM	CREDITS
10CS71	OODA	7	4
10CS72	ECS	7	4
10CS73	PTW	7	4
10CS74	DWDM	7	4
10CS75	JAVA	7	4
10CS76	SAN	7	4
10CS81	ACA	8	4
10CS82	SSM	8	4
10CS83	NM	8	4
10CS84	CC	8	4
10CS85	PW	8	4
15CS31	M3	3	4
15CS32	ADE	3	4
15CS33	DSA	3	4
15CS34	CO	3	4
15CS35	USP	3	3
15CS36	DMS	3	3
15CS41	M4	4	4
15CS42	SE	4	4
15CS43	DAA	4	4
15CS44	MPMC	4	4
15CS45	OOC	4	3
15CS46	DC	4	3
15CS51	ME	5	4
15CS52	CN	5	4
15CS53	DBMS	5	4
15CS54	ATC	5	4
15CS55	JAVA	5	3
15CS56	AI	5	3

```
29 rows in set (0.004 sec)
```

```
MariaDB [clg]> SELECT S.*, SS.SEM, SS.SEC
-> FROM STUDENT S, SEMSEC SS, CLASS C
-> WHERE S.USN = C.USN AND
-> SS.SSID = C.SSID AND
-> SS.SEM = 4 AND SS.SEC='C';
+-----+-----+-----+-----+-----+
| USN      | SNAME    | ADDRESS   | PHONE    | GENDER   | SEM     | SEC     |
+-----+-----+-----+-----+-----+
| 1RN15CS091 | SANTOSH | MANGALURU | 8812332 | M        | 4       | C       |
+-----+-----+-----+-----+-----+
1 row in set (0.040 sec)
```

```
MariaDB [clg]> SELECT SS.SEM, SS.SEC, S.GENDER, COUNT (S.GENDER) AS COUNT
-> FROM STUDENT S, SEMSEC SS, CLASS C
-> WHERE S.USN = C.USN AND
-> SS.SSID = C.SSID
-> GROUP BY SS.SEM, SS.SEC, S.GENDER
-> ORDER BY SEM;
+-----+-----+-----+-----+
| SEM   | SEC   | GENDER | COUNT |
+-----+-----+-----+-----+
| 3     | A     | M      | 1      |
| 3     | B     | F      | 1      |
| 3     | C     | M      | 1      |
| 4     | A     | F      | 1      |
| 4     | A     | M      | 1      |
| 4     | B     | M      | 1      |
| 4     | C     | M      | 1      |
| 7     | A     | F      | 1      |
| 7     | A     | M      | 2      |
| 8     | A     | F      | 1      |
| 8     | A     | M      | 1      |
| 8     | B     | F      | 1      |
| 8     | C     | F      | 1      |
+-----+-----+-----+-----+
```

```
MariaDB [clg]> CREATE VIEW STU_TEST1_MARKS_VIEW
-> AS
-> SELECT TEST1, SUBCODE
-> FROM IAMARKS
-> WHERE USN = '1RN13CS091';
Query OK, 0 rows affected (0.130 sec)
```

```
MariaDB [clg]> select * from STU_TEST1_MARKS_VIEW;
+-----+-----+
| TEST1 | SUBCODE |
+-----+-----+
|    15 | 10CS81  |
|    12 | 10CS82  |
|    19 | 10CS83  |
|    20 | 10CS84  |
|    15 | 10CS85  |
+-----+-----+
5 rows in set (0.146 sec)
```

```

MariaDB [clg]> SELECT S.USN,S.SNAME,S.ADDRESS,S.PHONE,S.GENDER,
-> (CASE
-> WHEN IA.FINALIA BETWEEN 17 AND 20 THEN 'OUTSTANDING'
-> WHEN IA.FINALIA BETWEEN 12 AND 16 THEN 'AVERAGE'
-> ELSE 'WEAK'
-> END) AS CAT
-> FROM STUDENT S, SEMSEC SS, IAMARKS IA, SUBJECT SUB
-> WHERE S.USN = IA.USN AND
-> SS.SSID = IA.SSID AND
-> SUB.SUBCODE = IA.SUBCODE AND
-> SUBSEM = 8;
+-----+-----+-----+-----+-----+-----+
| USN      | SNAME   | ADDRESS | PHONE  | GENDER | CAT    |
+-----+-----+-----+-----+-----+-----+
| 1RN13CS091 | TEESHA  | BENGALURU | 7712312 | F      | WEAK   |
| 1RN13CS091 | TEESHA  | BENGALURU | 7712312 | F      | WEAK   |
| 1RN13CS091 | TEESHA  | BENGALURU | 7712312 | F      | WEAK   |
| 1RN13CS091 | TEESHA  | BENGALURU | 7712312 | F      | WEAK   |
| 1RN13CS091 | TEESHA  | BENGALURU | 7712312 | F      | WEAK   |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.164 sec)

```