```
MariaDB [airline]> use airline;
Database changed
MariaDB [airline]> select distinct a.aname from aircraft a where a.aid in(select c.aid from certified c,employee e w
here c.eid=e.eid and not exists(select * from employee el where el.eid=e.eid and el.salary<80000));
+------------+
| aname      |
+------------+
| 747        |
| Dreamliner |
| Boeing     |
| Dream      |
+------------+
4 rows in set (0.189 sec)
```

```
atabase changed
ariaDB [airline]> desc aircraft;
+---------------+-------------+------+-----+---------+-------+
| Field         | Type        | Null | Key | Default | Extra |
+---------------+-------------+------+-----+---------+-------+
| AID           | int(11)     | NO   | PRI | NULL    |       |
| ANAME         | varchar(10) | YES  |     | NULL    |       |
| CRUISINGRANGE | int(11)     | YES  |     | NULL    |       |
+---------------+-------------+------+-----+---------+-------+
 rows in set (0.923 sec)

ariaDB [airline]> insert into aircraft values(101,'747',3000);
uery OK, 1 row affected (0.554 sec)

ariaDB [airline]> insert into aircraft values(102,'Boeing',900);
uery OK, 1 row affected (0.189 sec)

ariaDB [airline]> insert into aircraft values(103,'647',800);
uery OK, 1 row affected (0.216 sec)

ariaDB [airline]> insert into aircraft values(104,'Dreamliner',10000);
uery OK, 1 row affected (0.187 sec)

riaDB [airline]> insert into aircraft values(105,'Boeing',3500);
uery OK, 1 row affected (0.233 sec)

riaDB [airline]> insert into aircraft values(106,'707',1500);
ery OK, 1 row affected (0.223 sec)
```

```
MariaDB [airline]> insert into aircraft values(107,'Dream', 120000);
Query OK, 1 row affected (0.192 sec)

MariaDB [airline]> commit;
Query OK, 0 rows affected (0.011 sec)

MariaDB [airline]> create table airline.employee(eid int,ename varchar(30) null,salary real null,primary key(eid));
Query OK, 0 rows affected (0.906 sec)

MariaDB [airline]> insert into employees values(701,'A',50000);
ERROR 1146 (42S02): Table 'airline.employees' doesn't exist
MariaDB [airline]> insert into employee values(701,'A',50000);
Query OK, 1 row affected (0.163 sec)

MariaDB [airline]> insert into employee values(702,'B',100000);
Query OK, 1 row affected (0.180 sec)

MariaDB [airline]> insert into employee values(703,'C',150000);
Query OK, 1 row affected (0.199 sec)

MariaDB [airline]> insert into employee values(703,'C',150000);
ERROR 1062 (23000): Duplicate entry '703' for key 'PRIMARY'
MariaDB [airline]> insert into employee values(704,'D',90000);
Query OK, 1 row affected (0.203 sec)

MariaDB [airline]> insert into employee values(705,'E',40000);
Query OK, 1 row affected (0.079 sec)
```

```
ariaDB [airline]> create table airline.certified(eid int,aid int, foreign key(eid) references employee (eid),foreign k
(aid) references aircraft(aid));
uery OK, 0 rows affected (0.480 sec)

ariaDB [airline]> desc certified;
+-------+---------+------+-----+---------+-------+
| Field | Type    | Null | Key | Default | Extra |
+-------+---------+------+-----+---------+-------+
| eid   | int(11) | YES  | MUL | NULL    |       |
| aid   | int(11) | YES  | MUL | NULL    |       |
+-------+---------+------+-----+---------+-------+
 rows in set (0.194 sec)

ariaDB [airline]> insert into certified values(701,101);
uery OK, 1 row affected (0.191 sec)

ariaDB [airline]> insert into certified values(701,102);
uery OK, 1 row affected (0.221 sec)
```

```
MariaDB [airline]> use airline;
Database changed
MariaDB [airline]> select distinct a.aname from aircraft a where a.aid in(select c.aid from certified c,employee e w
here c.eid=e.eid and not exists(select * from employee e1 where e1.eid=e.eid and e1.salary<80000));
+------------+
| aname      |
+------------+
| 747        |
| Dreamliner |
| Boeing     |
| Dream      |
+------------+
4 rows in set (0.189 sec)
```

```
MariaDB [airline]> select * from flights;
+------+-----------+-----------+----------+----------------------------+----------------------------+-------+
| flno | ffrom     | tto       | distance | departs                    | arrives                    | price |
+------+-----------+-----------+----------+----------------------------+----------------------------+-------+
|  101 | Bangalore | Delhi     |     2500 | 2005-05-13 07:15:31.000000 | 2005-05-13 17:15:31.000000 |  5000 |
|  102 | Bangalore | Lucknow   |     3000 | 2005-05-13 07:15:31.000000 | 2005-05-13 11:15:31.000000 |  6000 |
|  103 | Lucknow   | Delhi     |      500 | 2005-05-13 12:15:31.000000 | 2005-05-13 17:15:31.000000 |  3000 |
|  104 | Bangalore | Frankfurt |     8500 | 2005-05-13 07:15:31.000000 | 2005-05-13 23:15:31.000000 | 75000 |
|  105 | Kolkata   | Delhi     |     3400 | 2005-05-13 07:15:31.000000 | 2005-05-13 09:15:31.000000 |  7000 |
|  107 | Bangalore | Frankfurt |     8000 | 2005-05-13 07:15:31.000000 | 2005-05-13 22:15:31.000000 | 60000 |
+------+-----------+-----------+----------+----------------------------+----------------------------+-------+
6 rows in set (0.198 sec)

MariaDB [airline]> select * from employee;
+-----+-------+--------+
| eid | ename | salary |
+-----+-------+--------+
| 701 | A     |  50000 |
| 702 | B     | 100000 |
| 703 | C     | 150000 |
| 704 | D     |  90000 |
| 705 | E     |  40000 |
| 706 | F     |  60000 |
| 707 | G     |  90000 |
+-----+-------+--------+
7 rows in set (0.003 sec)
```

```
MariaDB [airline]> select * from aircraft;
+------+------------+--------------+
| AID  | ANAME      | CRUISINGRANGE |
+------+------------+--------------+
| 101  | 747        |         3000 |
| 102  | Boeing     |          900 |
| 103  | 647        |          800 |
| 104  | Dreamliner |        10000 |
| 105  | Boeing     |         3500 |
| 106  | 707        |         1500 |
| 107  | Dream      |       120000 |
+------+------------+--------------+
7 rows in set (0.200 sec)

MariaDB [airline]> select * from certified;
+------+------+
| eid  | aid  |
+------+------+
|  701 |  101 |
|  701 |  102 |
|  701 |  106 |
|  701 |  105 |
|  702 |  104 |
|  703 |  104 |
|  704 |  104 |
|  702 |  107 |
|  703 |  107 |
|  704 |  107 |
|  702 |  101 |
|  703 |  105 |
|  704 |  105 |
|  705 |  103 |
+------+------+
14 rows in set (0.009 sec)
```

```
MariaDB [airline]> select c.eid, max(a.cruisingrange) from certified c, aircraft a where c.aid=a.aid group by c.eid
having count(*)>3;
+-------+----------------------+
| eid   | max(a.cruisingrange) |
+-------+----------------------+
|  701  |                 3500 |
+-------+----------------------+
1 row in set (0.134 sec)
```

```
MariaDB [airline]> select distinct e.ename from employee e where e.salary<(select min(f.price) from flight
s f where f.ffrom='Bangalore' and f.tto='Frankfurt');
+-------+
| ename |
+-------+
| A     |
| E     |
+-------+
2 rows in set (0.015 sec)
```

```
    -> WHERE A.cruisingrange >(SELECT MIN(F.DISTANCE)
    -> FROM FLIGHTS F
    -> WHERE F.FFROM = 'Bangalore' AND F.TTO = 'Frankfurt' );
+-----+
| aid |
+-----+
| 104 |
| 107 |
+-----+
2 rows in set (0.002 sec)
```

```
    ->  FROM EMPLOYEE E
    ->  WHERE E.eid NOT IN ( SELECT DISTINCT C.eid
    ->   FROM CERTIFIED C )
    ->  AND E.salary >( SELECT AVG(E1.salary)
    ->   FROM EMPLOYEE E1
    ->   WHERE E1.eid IN
    ->  ( SELECT DISTINCT C1.eid
    ->   FROM CERTIFIED C1 ) );
```

ename	salary
G	90000

row in set (0.011 sec)

```
MariaDB [airline]> insert into certified values(701,106);
Query OK, 1 row affected (0.202 sec)

MariaDB [airline]> insert into certified values(701,105);
Query OK, 1 row affected (0.217 sec)

MariaDB [airline]> insert into certified values(702,104);
Query OK, 1 row affected (0.206 sec)

MariaDB [airline]> insert into certified values(703,104);
Query OK, 1 row affected (0.216 sec)

MariaDB [airline]> insert into certified values(704,104);
Query OK, 1 row affected (0.210 sec)

MariaDB [airline]> insert into certified values(702,107);
Query OK, 1 row affected (0.173 sec)

MariaDB [airline]> insert into certified values(703,107);
Query OK, 1 row affected (0.247 sec)

MariaDB [airline]> insert into certified values(704,107);
Query OK, 1 row affected (0.190 sec)

MariaDB [airline]> insert into certified values(702,101);
Query OK, 1 row affected (0.152 sec)

MariaDB [airline]> insert into certified values(703,105);
Query OK, 1 row affected (0.089 sec)
```

```
        ->    FROM AIRCRAFT A, CERTIFIED C, EMPLOYEE E
        ->    WHERE A.aid = C.aid AND C.eid = E.eid AND A.cruisingrange > 1000
        ->    GROUP BY A.aid, A.aname )  Temp;
```

name	AvgSalary
747	75000
Dreamliner	113333.33333333333
Boeing	96666.66666666667
707	50000
Dream	113333.33333333333

rows in set (0.005 sec)

```
DB [airline]> SELECT F.departs
> FROM FLIGHTS F
> WHERE F.flno IN ( ( SELECT F0.flno
>  FROM FLIGHTS F0
>  WHERE F0.ffrom = 'Bangalore' AND F0.tto = 'Delhi'
>  AND extract(hour from F0.arrives) < 18 )
>  UNION
> ( SELECT F0.flno
>  FROM FLIGHTS F0, FLIGHTS F1
>  WHERE F0.ffrom = 'Bangalore' AND F0.tto <> 'Delhi'
>  AND F0.tto = F1.ffrom AND F1.tto = 'Delhi'
>  AND F1.departs > F0.arrives
>  AND extract(hour from F1.arrives) < 18)
>  UNION
> ( SELECT F0.flno
>  FROM FLIGHTS F0, FLIGHTS F1, FLIGHTS F2
>  WHERE F0.ffrom = 'Bangalore'
>  AND F0.tto = F1.ffrom
>  AND F1.tto = F2.ffrom
>  AND F2.tto = 'Delhi'
>  AND F0.tto <> 'Delhi'
>  AND F1.tto <> 'Delhi'
>  AND F1.departs > F0.arrives
>  AND F2.departs > F1.arrives
>  AND extract(hour from F2.arrives) < 18));
-------------------------+
arts                     |
-------------------------+
5-05-13 07:15:31.000000  |
5-05-13 07:15:31.000000  |
-------------------------+

s in set (0.143 sec)
```

```
MariaDB [airline]> SELECT DISTINCT E.ename
    -> FROM EMPLOYEE E, CERTIFIED C, AIRCRAFT A
    -> WHERE E.eid = C.eid AND C.aid = A.aid AND A.aname LIKE 'Boeing%';
+-------+
| ename |
+-------+
| A     |
| C     |
| D     |
+-------+
3 rows in set (0.017 sec)
```