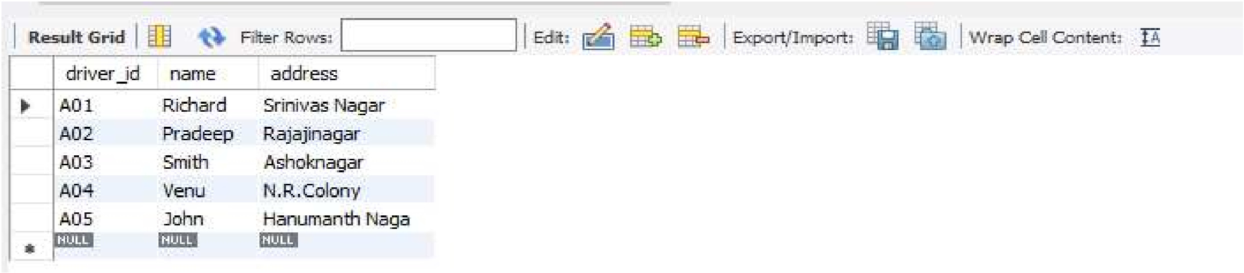
LAB-1: INSURANCE DATABASE

USN: 1BM19CS168

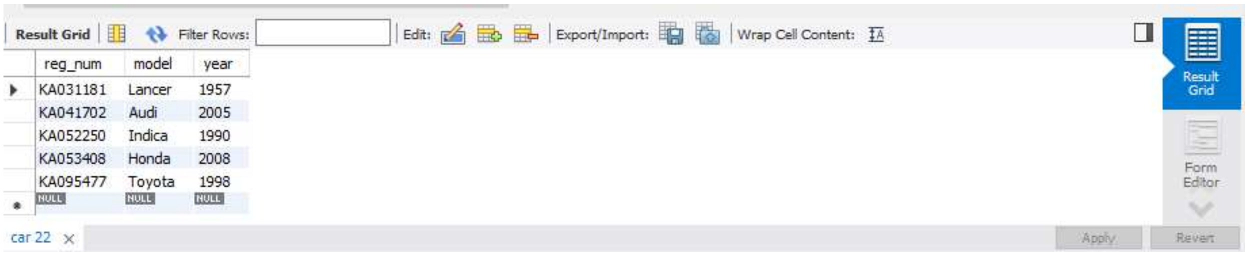
NAME: SWETHA PATIL

```
create database insurance;
use insurance;

use insurance;
create table person(driver_id varchar(5),name varchar(10),address varchar(20),primary key
(driver_id));
desc person;

create table car(reg_num varchar(10),model varchar(10),year int,primary key(reg_num));
desc car;

create table accident(report_num int,accident_date date,location varchar(20),primary
key(report_num));
desc accident;

create table owns(driver_id varchar(10),reg_num varchar(10),
primary key(driver_id,reg_num),
foreign key(driver_id) references person(driver_id),
foreign key(reg_num) references car(reg_num));
desc owns;

create table participated(driver_id varchar(10), reg_num varchar(10),
report_num int, damage_amount int,
primary key(driver_id,reg_num,report_num),
foreign key(driver_id) references person(driver_id),
foreign key(reg_num) references car(reg_num),
foreign key(report_num) references accident(report_num));
desc participated;

insert into person values('A01','Richard','Srinivas Nagar');
insert into person values('A02','Pradeep','Rajajinagar');
insert into person values('A03','Smith','Ashoknagar');
insert into person values('A04','Venu','N.R.Colony');
insert into person values('A05','John','Hanumanth Naga');
commit;
select * from person;
```



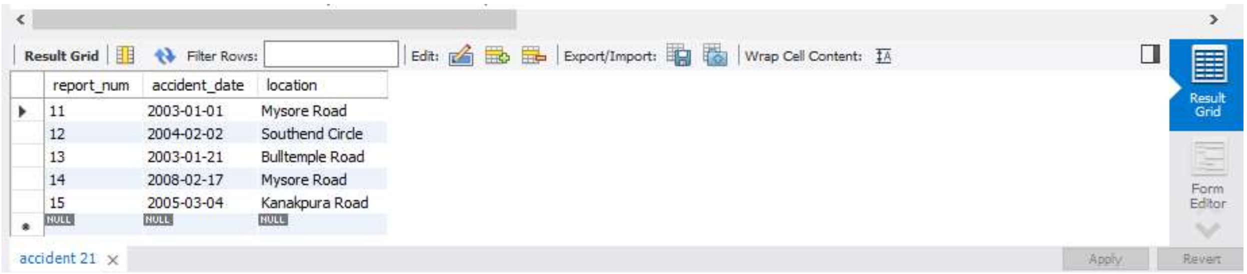
driver_id	name	address
A01	Richard	Srinivas Nagar
A02	Pradeep	Rajajinagar
A03	Smith	Ashoknagar
A04	Venu	N.R.Colony
A05	John	Hanumanth Naga
NULL	NULL	NULL

```
insert into car values('KA031181','Lancer',1957);
insert into car values('KA041702','Audi',2005);
insert into car values('KA052250','Indica',1990);
insert into car values('KA053408','Honda',2008);
insert into car values('KA095477','Toyota',1998);
commit;
select * from car;
```



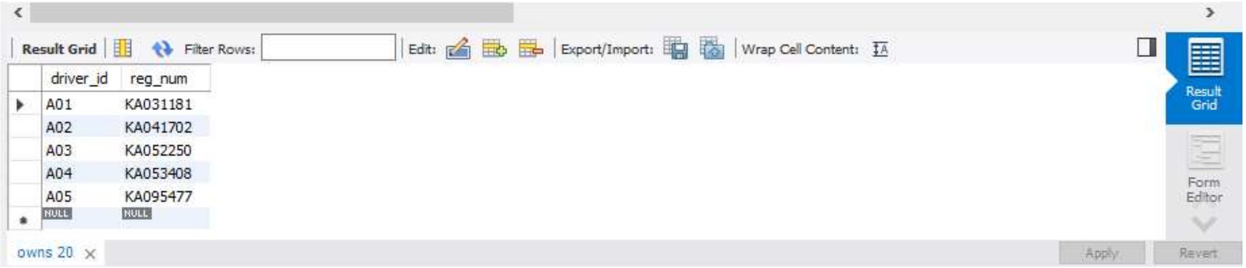
reg_num	model	year
KA031181	Lancer	1957
KA041702	Audi	2005
KA052250	Indica	1990
KA053408	Honda	2008
KA095477	Toyota	1998
NULL	NULL	NULL

```
insert into accident values(11,'2003-01-01','Mysore Road');
insert into accident values(12,'2004-02-02','Southend Circle');
insert into accident values(13,'2003-01-21','Bulltemple Road');
insert into accident values(14,'2008-02-17','Mysore Road');
insert into accident values(15,'2005-03-04','Kanakpura Road');
commit;
select * from accident;
```



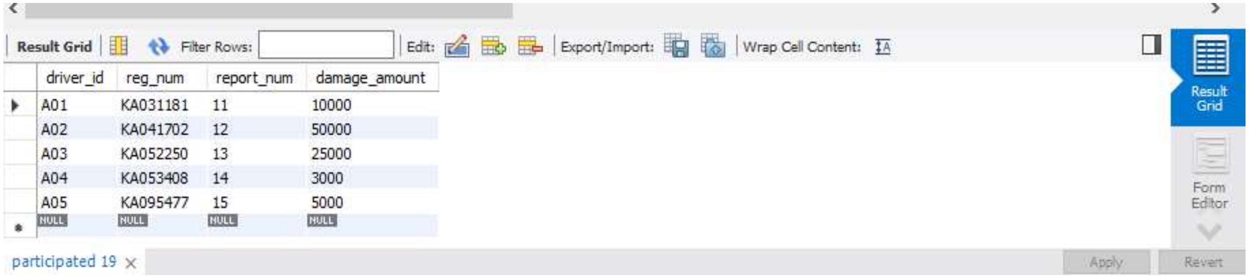
report_num	accident_date	location
11	2003-01-01	Mysore Road
12	2004-02-02	Southend Circle
13	2003-01-21	Bulltemple Road
14	2008-02-17	Mysore Road
15	2005-03-04	Kanakpura Road
NULL	NULL	NULL

```
insert into owns values('A01','KA031181');
insert into owns values('A02','KA041702');
insert into owns values('A03','KA052250');
insert into owns values('A04','KA053408');
insert into owns values('A05','KA095477');
commit;
select * from owns;
```



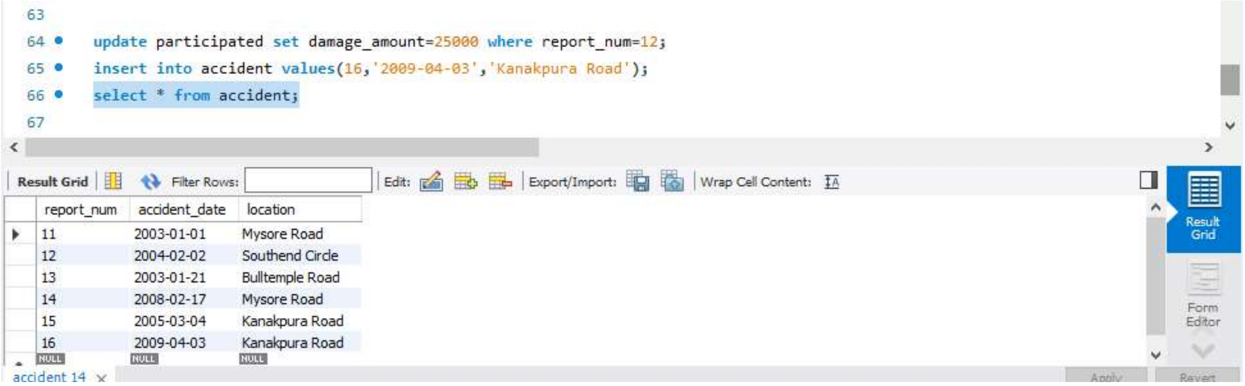
driver_id	reg_num
A01	KA031181
A02	KA041702
A03	KA052250
A04	KA053408
A05	KA095477
NULL	NULL

insert into participated values('A01','KA031181',11,10000);
insert into participated values('A02','KA041702',12,50000);
insert into participated values('A03','KA052250',13,25000);
insert into participated values('A04','KA053408',14,3000);
insert into participated values('A05','KA095477',15,5000);
commit;
select * from participated;



driver_id	reg_num	report_num	damage_amount
A01	KA031181	11	10000
A02	KA041702	12	50000
A03	KA052250	13	25000
A04	KA053408	14	3000
A05	KA095477	15	5000
NULL	NULL	NULL	NULL

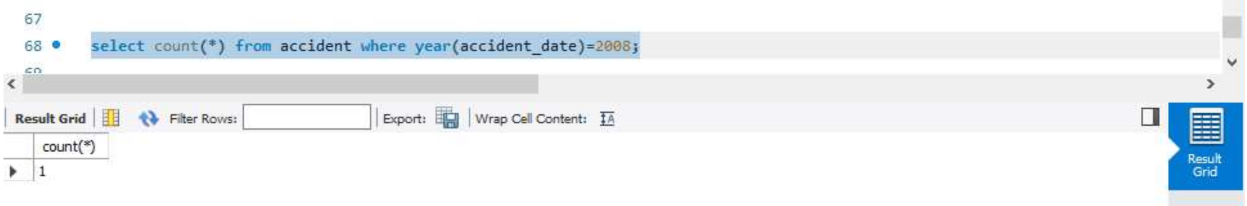
update participated set damage_amount=25000 where report_num=12;
insert into accident values(16,'2009-04-03','Kanakpura Road');
select * from accident;



```
update participated set damage_amount=25000 where report_num=12;
insert into accident values(16,'2009-04-03','Kanakpura Road');
select * from accident;
```

report_num	accident_date	location
11	2003-01-01	Mysore Road
12	2004-02-02	Southend Circle
13	2003-01-21	Bulltemple Road
14	2008-02-17	Mysore Road
15	2005-03-04	Kanakpura Road
16	2009-04-03	Kanakpura Road
NULL	NULL	NULL

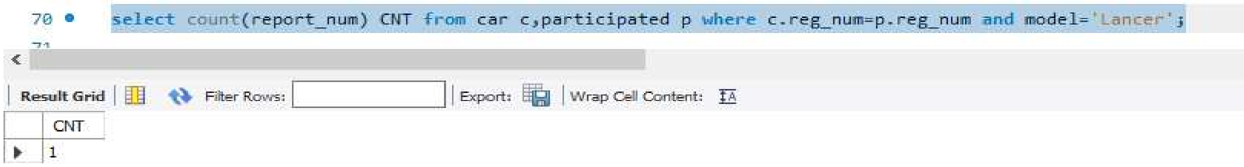
select count(*) from accident where year(accident_date)=2008;



```
select count(*) from accident where year(accident_date)=2008;
```

count(*)
1

select count(report_num) CNT from car c,participated p where c.reg_num=p.reg_num and model='Lancer';



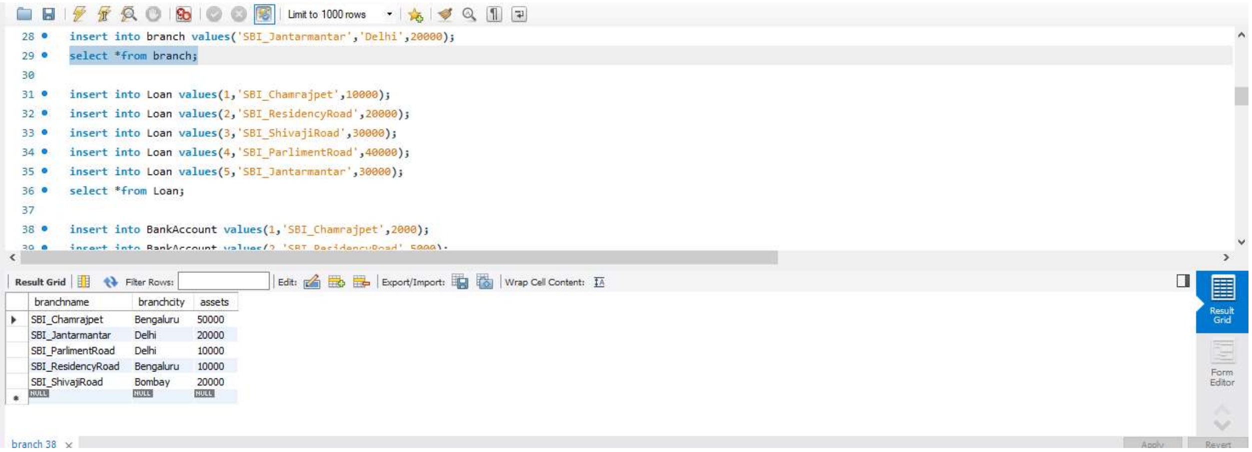
```
select count(report_num) CNT from car c,participated p where c.reg_num=p.reg_num and model='Lancer';
```

CNT
1

LAB-2: BANKING ENTERPRISE DATABASE USN:1BM19CS168

NAME : SWETHA PATIL

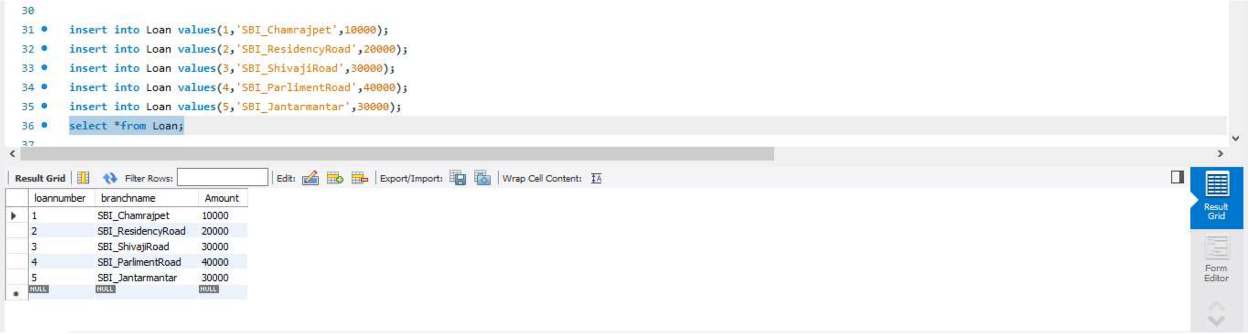
```
create database bank;
use bank;
create table branch(branchname varchar(30),branchcity varchar(30),assets real,primary
key(branchname));
desc branch;

create table BankAccount(Accno int,branchname varchar(30),balance real,primary key(Accno),
foreign key(branchname) references branch(branchname));
desc BankAccount;

create table BankCustomer(CustomerName varchar(30),CustomerStreet
varchar(30),Customercity varchar(30),
primary key (CustomerName));
desc BankCustomer;

create table Depositer(CustomerName varchar(30),Accno integer,primary
key(CustomerName,Accno),
foreign key(CustomerName) references BankCustomer(CustomerName),
foreign key(Accno) references BankAccount(Accno));
desc Depositer;


create table Loan(loannumber int,branchname varchar(30),Amount real,primary
key(loannumber),
foreign key(BranchName) references branch(branchname));
desc Loan;

insert into branch values('SBI_Chamrajpet','Bengaluru',50000);
insert into branch values('SBI_ResidencyRoad','Bengaluru',10000);
insert into branch values('SBI_ShivajiRoad','Bombay',20000);
insert into branch values('SBI_ParlimentRoad','Delhi',10000);
insert into branch values('SBI_Jantarmantar','Delhi',20000);
select *from branch;
```



```
insert into branch values('SBI_Jantarmantar','Delhi',20000);
select *from branch;

insert into Loan values(1,'SBI_Chamrajpet',10000);
insert into Loan values(2,'SBI_ResidencyRoad',20000);
insert into Loan values(3,'SBI_ShivajiRoad',30000);
insert into Loan values(4,'SBI_ParlimentRoad',40000);
insert into Loan values(5,'SBI_Jantarmantar',30000);
select *from Loan;

insert into BankAccount values(1,'SBI_Chamrajpet',2000);
insert into BankAccount values(2,'SBI_ResidencyRoad',5000);
```

branchname	branchcity	assets
SBI_Chamrajpet	Bengaluru	50000
SBI_Jantarmantar	Delhi	20000
SBI_ParlimentRoad	Delhi	10000
SBI_ResidencyRoad	Bengaluru	10000
SBI_ShivajiRoad	Bombay	20000
NULL	NULL	NULL

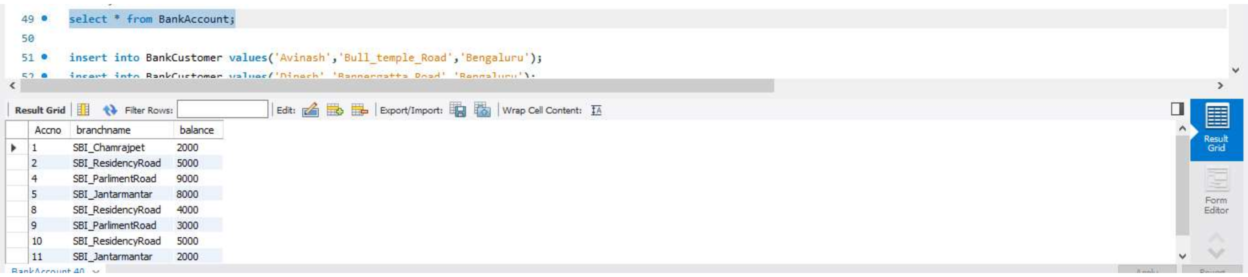
insert into Loan values(1,'SBI_Chamrajpet',10000);
insert into Loan values(2,'SBI_ResidencyRoad',20000);
insert into Loan values(3,'SBI_ShivajiRoad',30000);
insert into Loan values(4,'SBI_ParlimentRoad',40000);
insert into Loan values(5,'SBI_Jantarmantar',30000);
select *from Loan;



```
insert into Loan values(1,'SBI_Chamrajpet',10000);
insert into Loan values(2,'SBI_ResidencyRoad',20000);
insert into Loan values(3,'SBI_ShivajiRoad',30000);
insert into Loan values(4,'SBI_ParlimentRoad',40000);
insert into Loan values(5,'SBI_Jantarmantar',30000);
select *from Loan;
```

loannumber	branchname	Amount
1	SBI_Chamrajpet	10000
2	SBI_ResidencyRoad	20000
3	SBI_ShivajiRoad	30000
4	SBI_ParlimentRoad	40000
5	SBI_Jantarmantar	30000
NULL	NULL	NULL

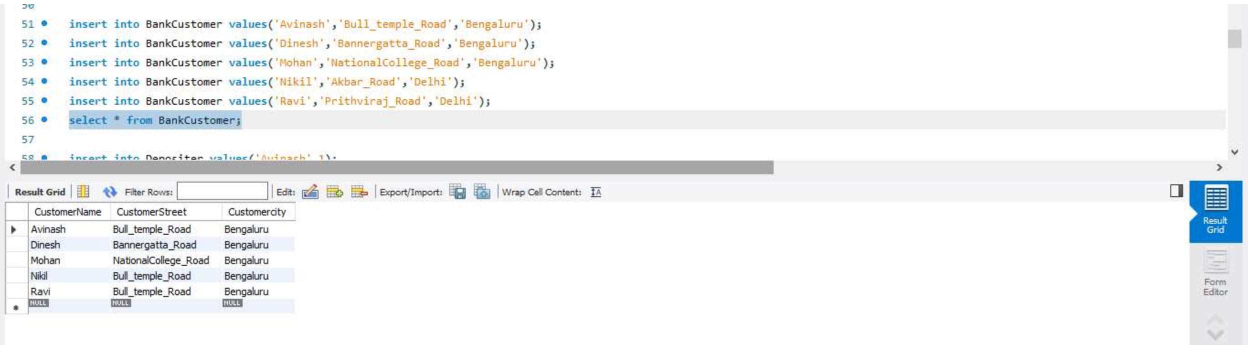
insert into BankAccount values(1,'SBI_Chamrajpet',2000);
insert into BankAccount values(2,'SBI_ResidencyRoad',5000);
insert into BankAccount values(3,'SBI_ShivajiRoad',6000);
insert into BankAccount values(4,'SBI_ParlimentRoad',9000);
insert into BankAccount values(5,'SBI_Jantarmantar',8000);
insert into BankAccount values(6,'SBI_ShivajiRoad',4000);
insert into BankAccount values(8,'SBI_ResidencyRoad',4000);
insert into BankAccount values(9,'SBI_ParlimentRoad',3000);
insert into BankAccount values(10,'SBI_ResidencyRoad',5000);
insert into BankAccount values(11,'SBI_Jantarmantar',2000);
commit;
select * from BankAccount;



```
select * from BankAccount;

insert into BankCustomer values('Avinash','Bull_temple_Road','Bengaluru');
insert into BankCustomer values('Dinesh','Bannergatta_Road','Bengaluru');
```

Accno	branchname	balance
1	SBI_Chamrajpet	2000
2	SBI_ResidencyRoad	5000
4	SBI_ParlimentRoad	9000
5	SBI_Jantarmantar	8000
8	SBI_ResidencyRoad	4000
9	SBI_ParlimentRoad	3000
10	SBI_ResidencyRoad	5000
11	SBI_Jantarmantar	2000

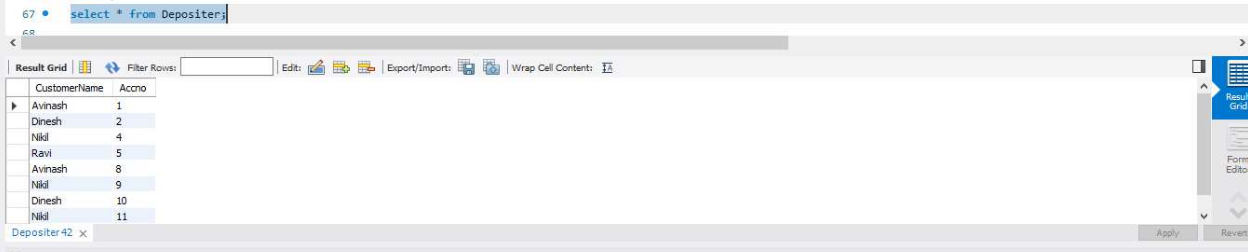
insert into BankCustomer values('Avinash','Bull_temple_Road','Bengaluru');
insert into BankCustomer values('Dinesh','Bannergatta_Road','Bengaluru');
insert into BankCustomer values('Mohan','NationalCollege_Road','Bengaluru');
insert into BankCustomer values('Nikil','Akbar_Road','Delhi');
insert into BankCustomer values('Ravi','Prithviraj_Road','Delhi');
select * from BankCustomer;



```
insert into BankCustomer values('Avinash','Bull_temple_Road','Bengaluru');
insert into BankCustomer values('Dinesh','Bannergatta_Road','Bengaluru');
insert into BankCustomer values('Mohan','NationalCollege_Road','Bengaluru');
insert into BankCustomer values('Nikil','Akbar_Road','Delhi');
insert into BankCustomer values('Ravi','Prithviraj_Road','Delhi');
select * from BankCustomer;

insert into Depositer values('Avinash',1);
```

CustomerName	CustomerStreet	Customercity
Avinash	Bull_temple_Road	Bengaluru
Dinesh	Bannergatta_Road	Bengaluru
Mohan	NationalCollege_Road	Bengaluru
Nikil	Bull_temple_Road	Bengaluru
Ravi	Bull_temple_Road	Bengaluru
NULL	NULL	NULL

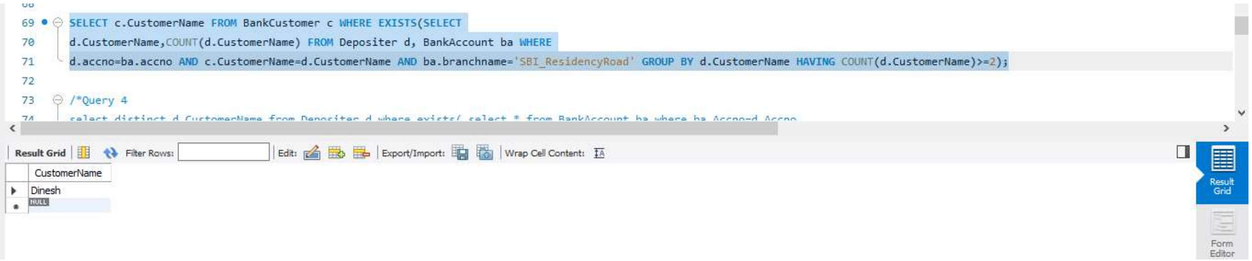
insert into Depositer values('Avinash',1);
insert into Depositer values('Dinesh',2);
insert into Depositer values('Nikil',4);
insert into Depositer values('Ravi',5);
insert into Depositer values('Avinash',8);
insert into Depositer values('Nikil',9);
insert into Depositer values('Dinesh',10);
insert into Depositer values('Nikil',11);
commit;
select * from Depositer;



```
commit;
select * from Depositer;
```

CustomerName	Accno
Avinash	1
Dinesh	2
Nikil	4
Ravi	5
Avinash	8
Nikil	9
Dinesh	10
Nikil	11

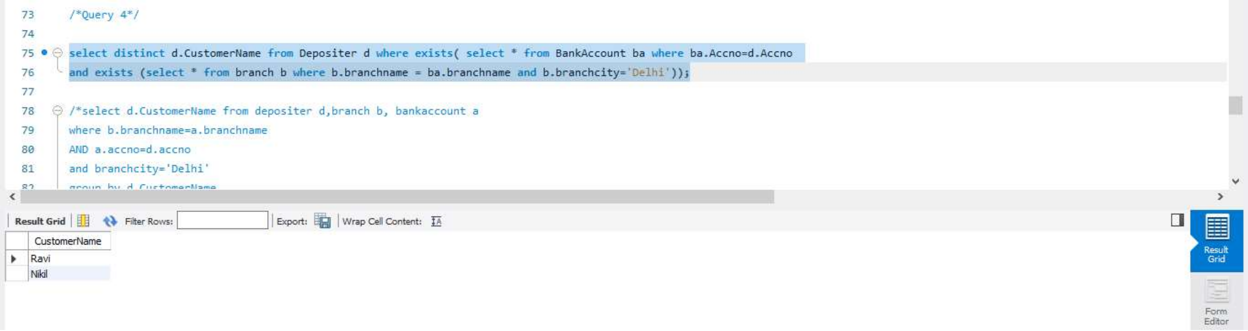
```
SELECT c.CustomerName FROM BankCustomer c WHERE EXISTS(SELECT
d.CustomerName,COUNT(d.CustomerName) FROM Depositer d, BankAccount ba WHERE
d.accno=ba.accno AND c.CustomerName=d.CustomerName AND
ba.branchname='SBI_ResidencyRoad' GROUP BY d.CustomerName HAVING
COUNT(d.CustomerName)>=2);
```



```
SELECT c.CustomerName FROM BankCustomer c WHERE EXISTS(SELECT
d.CustomerName,COUNT(d.CustomerName) FROM Depositer d, BankAccount ba WHERE
d.accno=ba.accno AND c.CustomerName=d.CustomerName AND ba.branchname='SBI_ResidencyRoad' GROUP BY d.CustomerName HAVING COUNT(d.CustomerName)>=2);

/*Query 4
select distinct d.CustomerName from Depositer d where exists( select * from BankAccount ba where ba.Accno=d.Accno
```

```
CustomerName
Dinesh
NULL
```

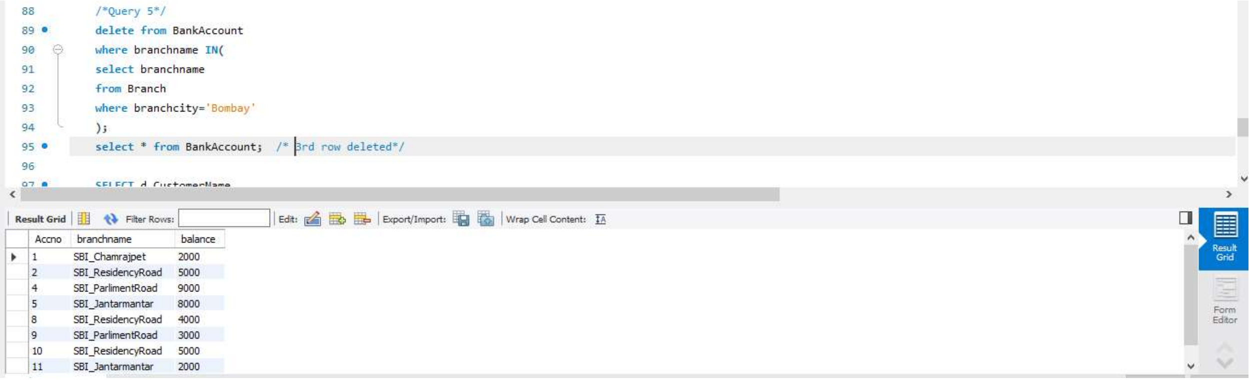
```
/*Query 4*/
select distinct d.CustomerName from Depositer d where exists( select * from BankAccount ba
where ba.Accno=d.Accno
and exists (select * from branch b where b.branchname = ba.branchname and
b.branchcity='Delhi'));
```



```
/*Query 4*/

select distinct d.CustomerName from Depositer d where exists( select * from BankAccount ba where ba.Accno=d.Accno
and exists (select * from branch b where b.branchname = ba.branchname and b.branchcity='Delhi'));

/*select d.CustomerName from depositer d,branch b, bankaccount a
where b.branchname=a.branchname
AND a.accno=d.accno
and branchcity='Delhi'
group by d.CustomerName
```

```
CustomerName
Ravi
Nikil
```

```
  /*Query 5*/

 delete from BankAccount
   where branchname IN(
   select branchname
          from Branch
   where branchcity='Bombay'
   );
Select * from BankAccount;
```



```
/*Query 5*/
delete from BankAccount
where branchname IN(
select branchname
from Branch
where branchcity='Bombay'
);
select * from BankAccount;  /* 3rd row deleted*/

SELECT d.CustomerName
```

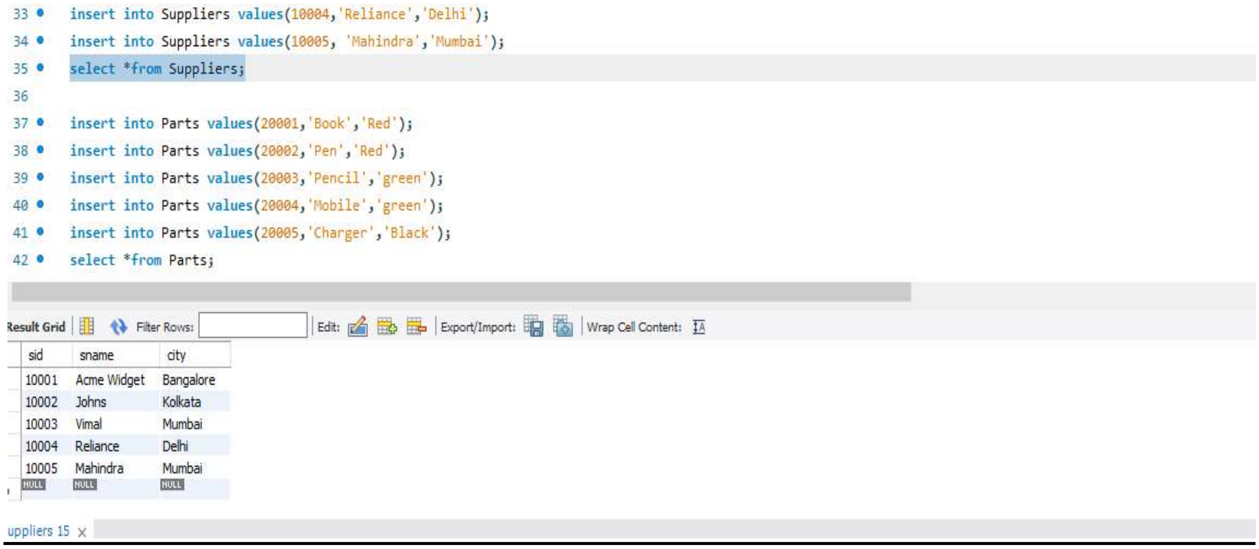
Accno	branchname	balance
1	SBI_Chamrajpet	2000
2	SBI_ResidencyRoad	5000
4	SBI_ParlimentRoad	9000
5	SBI_Jantarmantar	8000
8	SBI_ResidencyRoad	4000
9	SBI_ParlimentRoad	3000
10	SBI_ResidencyRoad	5000
11	SBI_Jantarmantar	2000

LAB-3: SUPPLIER DATABASE

USN: 1BM19CS168

NAME: SWETHA PATL

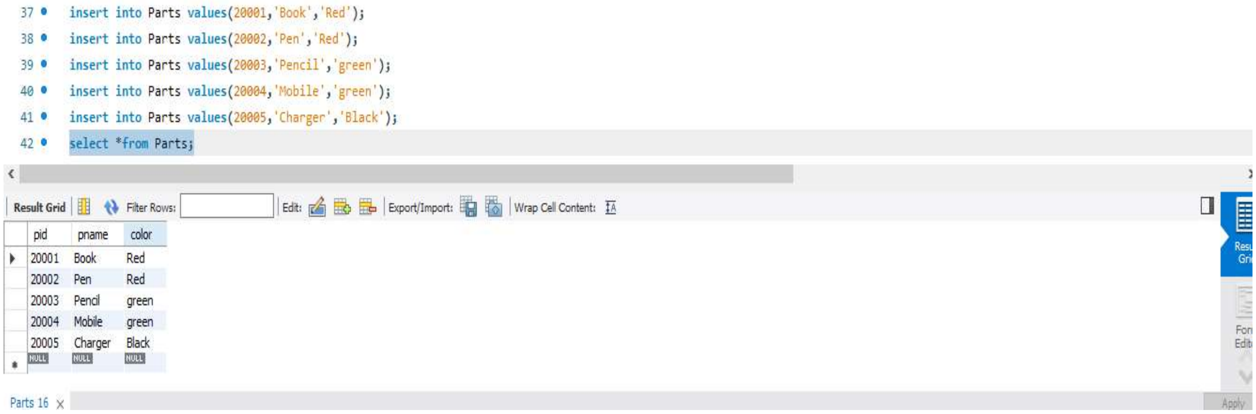
```
create database Supplier;
use Supplier;

create table Suppliers(
sid varchar(20) ,
sname varchar(20),
city varchar(20),
primary key(sid)
);
desc Suppliers;

create table Parts(
pid integer,
pname varchar(20),
color varchar(20),
primary key(pid)
);
desc Parts;

create table Catalog(
sid varchar(20),
pid integer,
cost real,
primary key(sid,pid),
foreign key(sid) references Suppliers(sid),
foreign key(pid) references Parts(pid)
);
desc Catalog;



insert into Suppliers values(10001,'Acme Widget','Bangalore');
insert into Suppliers values(10002,'Johns','Kolkata');
insert into Suppliers values(10003,'Vimal','Mumbai');
insert into Suppliers values(10004,'Reliance','Delhi');
insert into Suppliers values(10005, 'Mahindra','Mumbai');
select *from Suppliers;
```



```
insert into Suppliers values(10004,'Reliance','Delhi');
insert into Suppliers values(10005, 'Mahindra','Mumbai');
select *from Suppliers;

insert into Parts values(20001,'Book','Red');
insert into Parts values(20002,'Pen','Red');
insert into Parts values(20003,'Pencil','green');
insert into Parts values(20004,'Mobile','green');
insert into Parts values(20005,'Charger','Black');
select *from Parts;
```

```
sid    sname         city
10001  Acme Widget   Bangalore
10002  Johns         Kolkata
10003  Vimal         Mumbai
10004  Reliance      Delhi
10005  Mahindra      Mumbai
NULL   NULL          NULL
```

insert into Parts values(20001,'Book','Red');
insert into Parts values(20002,'Pen','Red');
insert into Parts values(20003,'Pencil','green');
insert into Parts values(20004,'Mobile','green');
insert into Parts values(20005,'Charger','Black');
select *from Parts;

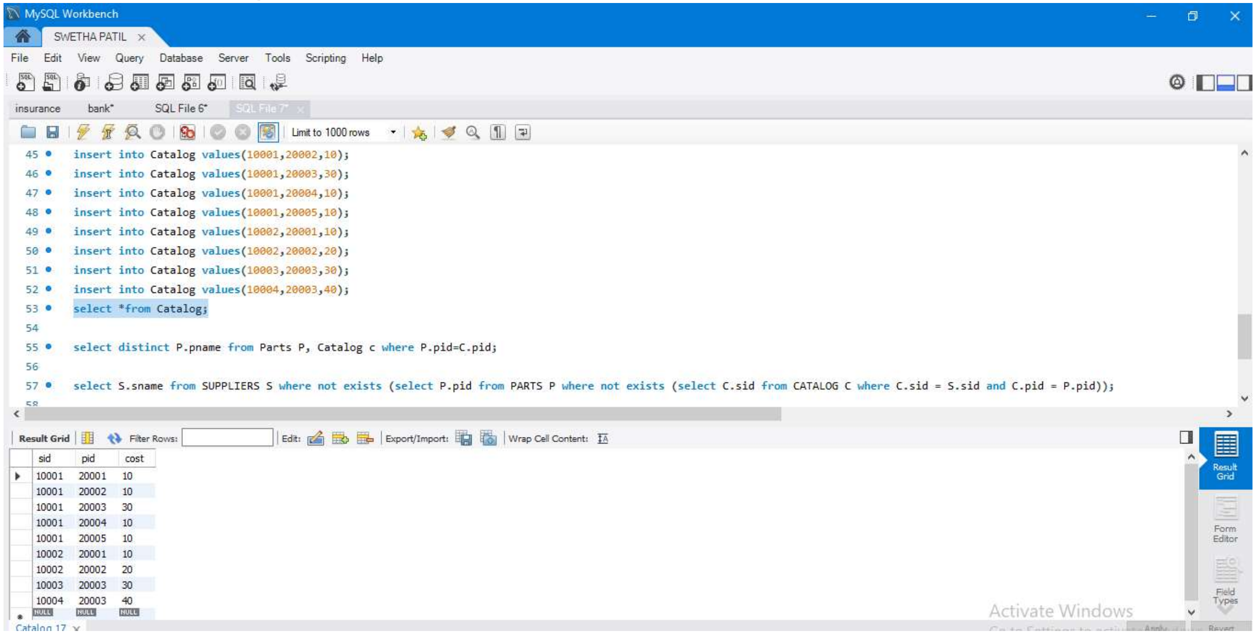


```
insert into Parts values(20001,'Book','Red');
insert into Parts values(20002,'Pen','Red');
insert into Parts values(20003,'Pencil','green');
insert into Parts values(20004,'Mobile','green');
insert into Parts values(20005,'Charger','Black');
select *from Parts;
```

```
pid    pname    color
20001  Book     Red
20002  Pen      Red
20003  Pencil   green
20004  Mobile   green
20005  Charger  Black
NULL   NULL     NULL
```

insert into Catalog values(10001,20001,10);
insert into Catalog values(10001,20002,10);
insert into Catalog values(10001,20003,30);
insert into Catalog values(10001,20004,10);
insert into Catalog values(10001,20005,10);
insert into Catalog values(10002,20001,10);
insert into Catalog values(10002,20002,20);
insert into Catalog values(10003,20003,30);
insert into Catalog values(10004,20003,40);

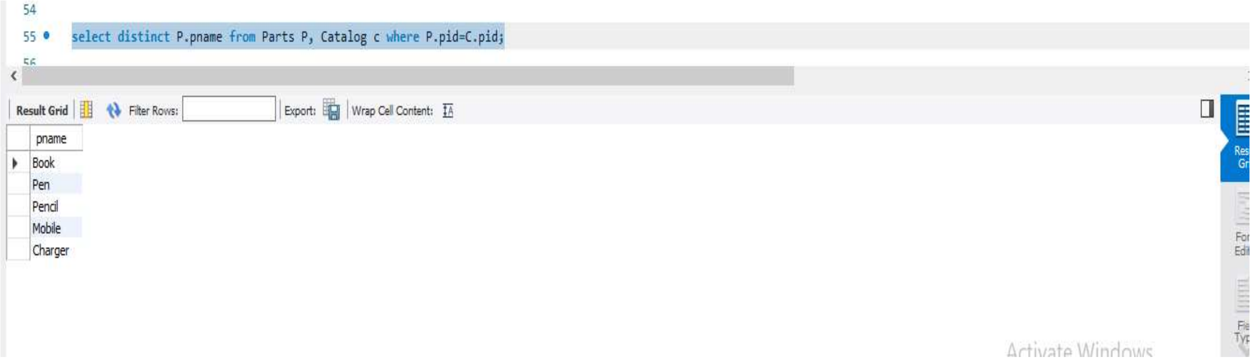
select *from Catalog;


MySQL Workbench
SWETHA PATIL
File Edit View Query Database Server Tools Scripting Help
insurance bank* SQL File 6* SQL File 7*
Limit to 1000 rows
Result Grid Filter Rows: Edit: Export/Import: Wrap Cell Content:
Result Grid
Form Editor
Field Types
Catalog 17
Activate Windows

```
insert into Catalog values(10001,20002,10);
insert into Catalog values(10001,20003,30);
insert into Catalog values(10001,20004,10);
insert into Catalog values(10001,20005,10);
insert into Catalog values(10002,20001,10);
insert into Catalog values(10002,20002,20);
insert into Catalog values(10003,20003,30);
insert into Catalog values(10004,20003,40);
select *from Catalog;

select distinct P.pname from Parts P, Catalog c where P.pid=C.pid;

select S.sname from SUPPLIERS S where not exists (select P.pid from PARTS P where not exists (select C.sid from CATALOG C where C.sid = S.sid and C.pid = P.pid));
```

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
NULL	NULL	NULL

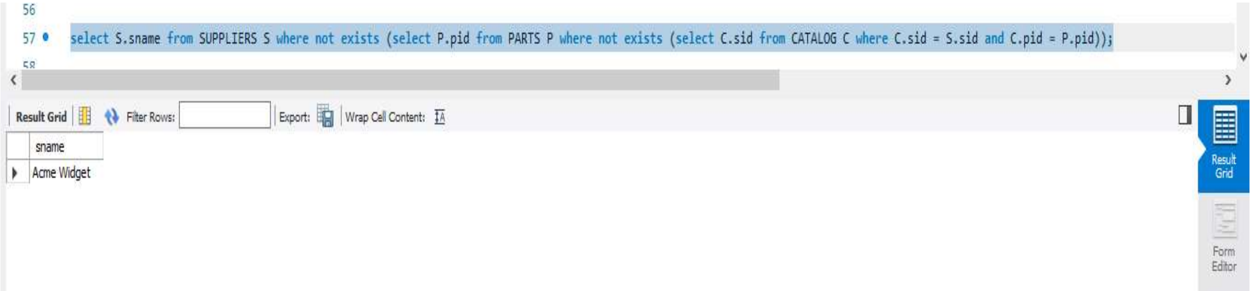
select distinct P.pname from Parts P, Catalog c where P.pid=C.pid;



```
select distinct P.pname from Parts P, Catalog c where P.pid=C.pid;
```

pname
Book
Pen
Pencil
Mobile
Charger

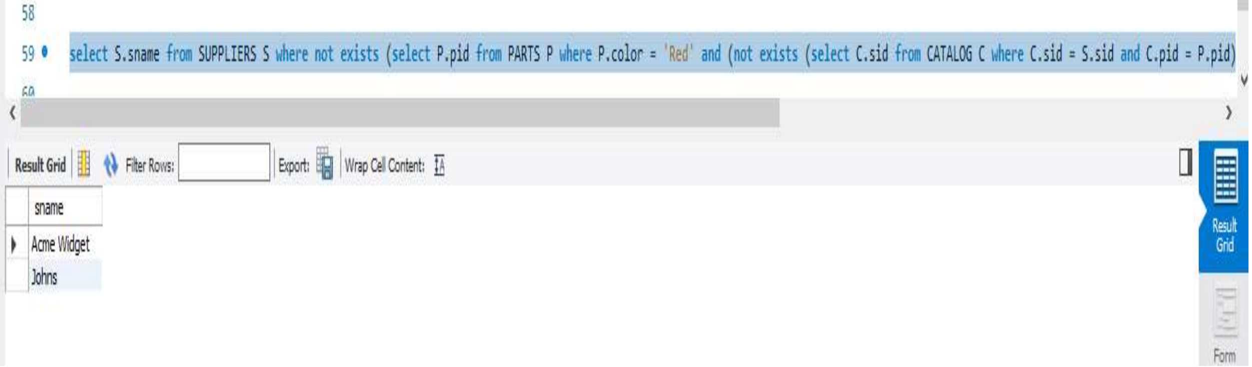
select S.sname from SUPPLIERS S where not exists (select P.pid from PARTS P where not exists (select C.sid from CATALOG C where C.sid = S.sid and C.pid = P.pid));



```
select S.sname from SUPPLIERS S where not exists (select P.pid from PARTS P where not exists (select C.sid from CATALOG C where C.sid = S.sid and C.pid = P.pid));
```

sname
Acme Widget

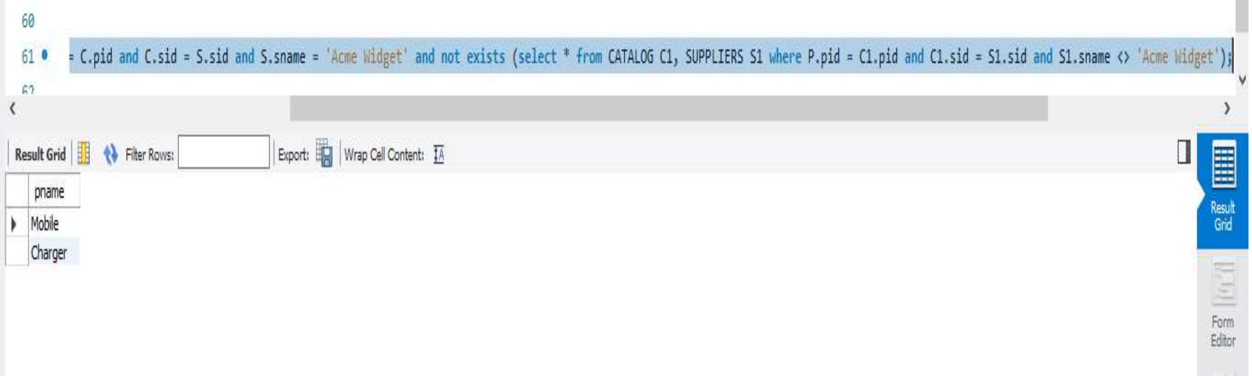
select S.sname from SUPPLIERS S where not exists (select P.pid from PARTS P where P.color = 'Red' and (not exists (select C.sid from CATALOG C where C.sid = S.sid and C.pid = P.pid)));



```
select S.sname from SUPPLIERS S where not exists (select P.pid from PARTS P where P.color = 'Red' and (not exists (select C.sid from CATALOG C where C.sid = S.sid and C.pid = P.pid)
```

```
sname
Acme Widget
Johns
```

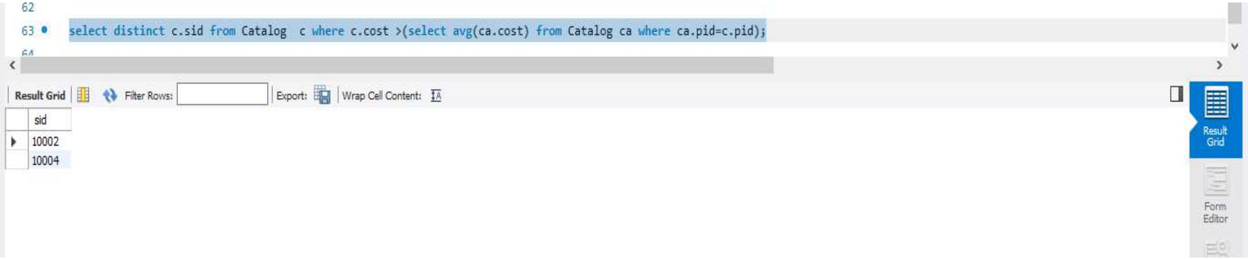
select P.pname from PARTS P, CATALOG C, SUPPLIERS S where P.pid = C.pid and C.sid = S.sid and S.sname = 'Acme Widget' and not exists (select * from CATALOG C1, SUPPLIERS S1 where P.pid = C1.pid and C1.sid = S1.sid and S1.sname <> 'Acme Widget');



```
= C.pid and C.sid = S.sid and S.sname = 'Acme Widget' and not exists (select * from CATALOG C1, SUPPLIERS S1 where P.pid = C1.pid and C1.sid = S1.sid and S1.sname <> 'Acme Widget');
```

```
pname
Mobile
Charger
```

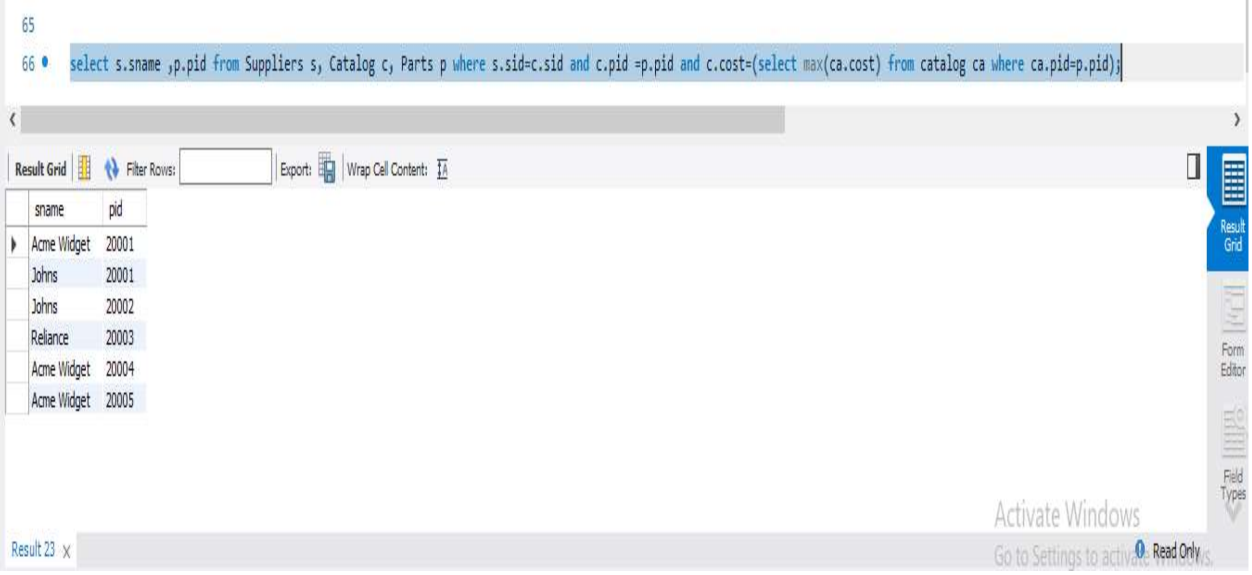
select distinct c.sid from Catalog c where c.cost >(select avg(ca.cost) from Catalog ca where ca.pid=c.pid);



```
select distinct c.sid from Catalog  c where c.cost >(select avg(ca.cost) from Catalog ca where ca.pid=c.pid);
```

```
sid
10002
10004
```

select s.sname ,p.pid from Suppliers s, Catalog c, Parts p where s.sid=c.sid and c.pid =p.pid and c.cost=(select max(ca.cost) from catalog ca where ca.pid=p.pid);



```
select s.sname ,p.pid from Suppliers s, Catalog c, Parts p where s.sid=c.sid and c.pid =p.pid and c.cost=(select max(ca.cost) from catalog ca where ca.pid=p.pid);
```

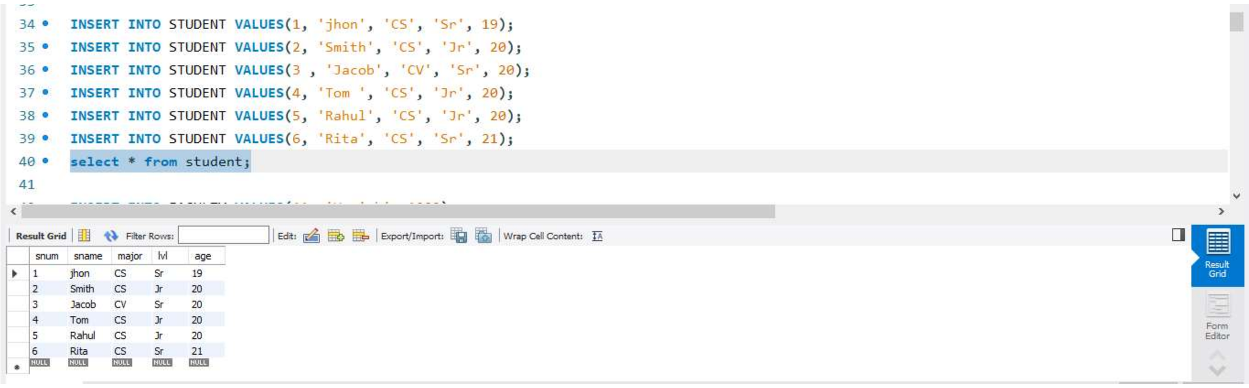
sname	pid
Acme Widget	20001
Johns	20001
Johns	20002
Reliance	20003
Acme Widget	20004
Acme Widget	20005

LAB-4: STUDENT FACULTY DATABASE

USN:1BM19CS168

NAME:SWETHA PATIL

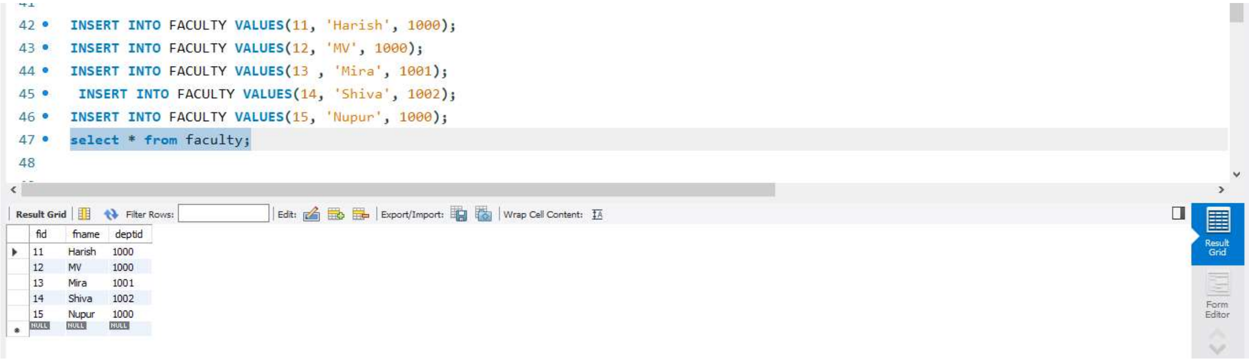
```
create database student_faculty;
use student_faculty;

CREATE TABLE student(
       snum INT,
       sname VARCHAR(10),
       major VARCHAR(2),
       lvl VARCHAR(2),
      age INT, primary key(snum));
desc student;

CREATE TABLE faculty(
       fid INT, fname VARCHAR(20),
       deptid INT,
      PRIMARY KEY(fid));
desc faculty;

CREATE TABLE class(
     cname VARCHAR(20),
     meets_at TIMESTAMP,
     room VARCHAR(10),
    fid INT,
       PRIMARY KEY(cname),
      FOREIGN KEY(fid) REFERENCES faculty(fid));
      desc class;

      CREATE TABLE enrolled(
       snum INT,
       cname VARCHAR(20),
      PRIMARY KEY(snum,cname),
            FOREIGN KEY(snum) REFERENCES student(snum),
            FOREIGN KEY(cname) REFERENCES class(cname));
desc enrolled;


INSERT INTO STUDENT VALUES(1, 'jhon', 'CS', 'Sr', 19);
INSERT INTO STUDENT VALUES(2, 'Smith', 'CS', 'Jr', 20);
INSERT INTO STUDENT VALUES(3 , 'Jacob', 'CV', 'Sr', 20);
INSERT INTO STUDENT VALUES(4, 'Tom ', 'CS', 'Jr', 20);
INSERT INTO STUDENT VALUES(5, 'Rahul', 'CS', 'Jr', 20);
INSERT INTO STUDENT VALUES(6, 'Rita', 'CS', 'Sr', 21);
select * from student;
```



```
INSERT INTO STUDENT VALUES(1, 'jhon', 'CS', 'Sr', 19);
INSERT INTO STUDENT VALUES(2, 'Smith', 'CS', 'Jr', 20);
INSERT INTO STUDENT VALUES(3 , 'Jacob', 'CV', 'Sr', 20);
INSERT INTO STUDENT VALUES(4, 'Tom ', 'CS', 'Jr', 20);
INSERT INTO STUDENT VALUES(5, 'Rahul', 'CS', 'Jr', 20);
INSERT INTO STUDENT VALUES(6, 'Rita', 'CS', 'Sr', 21);
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	Rahul	CS	Jr	20
6	Rita	CS	Sr	21
NULL	NULL	NULL	NULL	NULL

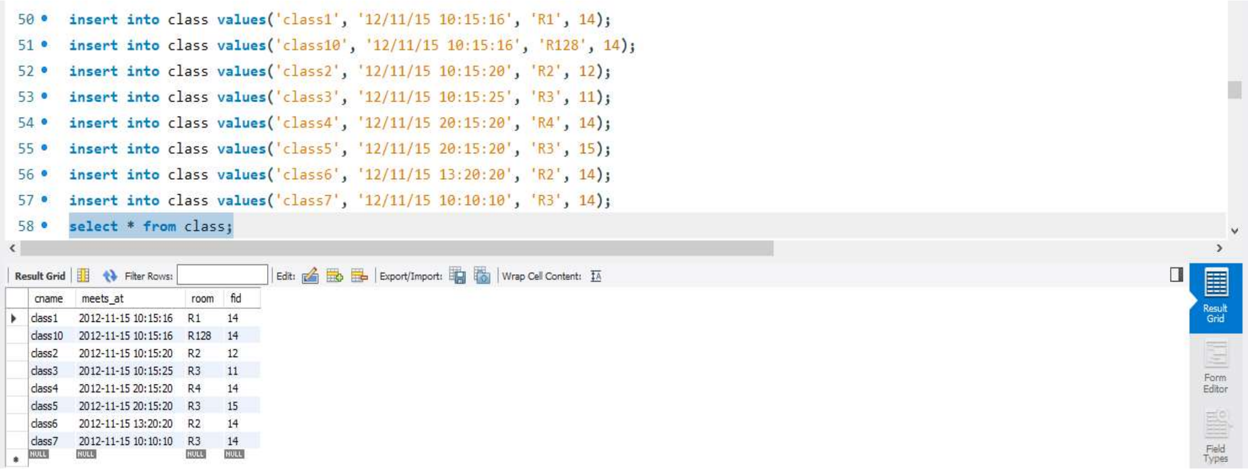
```
INSERT INTO FACULTY VALUES(11, 'Harish', 1000);
INSERT INTO FACULTY VALUES(12, 'MV', 1000);
INSERT INTO FACULTY VALUES(13 , 'Mira', 1001);
 INSERT INTO FACULTY VALUES(14, 'Shiva', 1002);
INSERT INTO FACULTY VALUES(15, 'Nupur', 1000);
select * from faculty;
```



```
INSERT INTO FACULTY VALUES(11, 'Harish', 1000);
INSERT INTO FACULTY VALUES(12, 'MV', 1000);
INSERT INTO FACULTY VALUES(13 , 'Mira', 1001);
 INSERT INTO FACULTY VALUES(14, 'Shiva', 1002);
INSERT INTO FACULTY VALUES(15, 'Nupur', 1000);
select * from faculty;
```

fid	fname	deptid
11	Harish	1000
12	MV	1000
13	Mira	1001
14	Shiva	1002
15	Nupur	1000
NULL	NULL	NULL

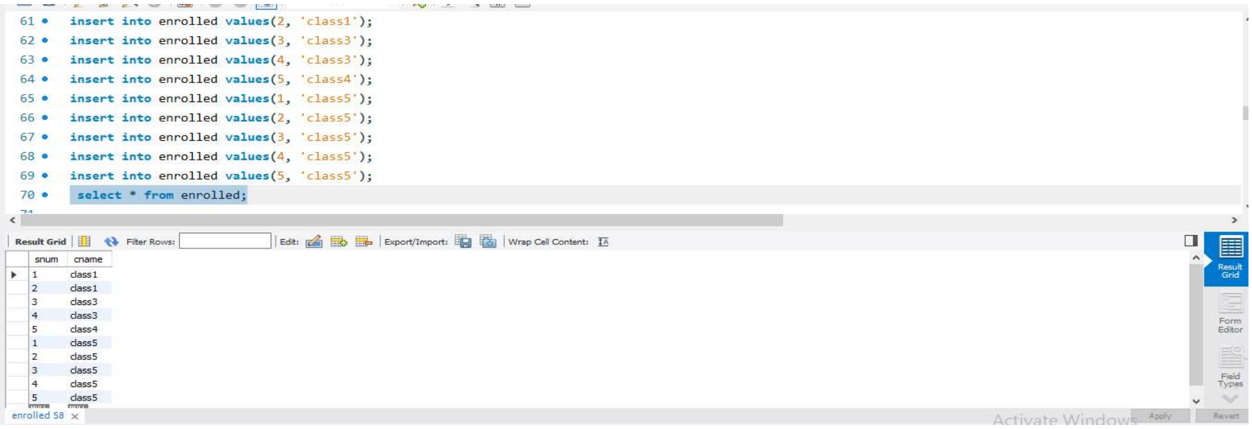
```
INSERT INTO CLASS VALUES('class1', '12/11/15 10:15:16', 'R1', 14);
INSERT INTO CLASS VALUES('class10', '12/11/15 10:15:16', 'R128', 14);
INSERT INTO CLASS VALUES('class2', '12/11/15 10:15:20', 'R2', 12);
INSERT INTO CLASS VALUES('class3', '12/11/15 10:15:25', 'R3', 11);
 INSERT INTO CLASS VALUES('class4', '12/11/15 20:15:20', 'R4', 14);
INSERT INTO CLASS VALUES('class5', '12/11/15 20:15:20', 'R3', 15);
INSERT INTO CLASS VALUES('class6', '12/11/15 13:20:20', 'R2', 14);
INSERT INTO CLASS VALUES('class7', '12/11/15 10:10:10', 'R3', 14);
select * from class;
```



```
insert into class values('class1', '12/11/15 10:15:16', 'R1', 14);
insert into class values('class10', '12/11/15 10:15:16', 'R128', 14);
insert into class values('class2', '12/11/15 10:15:20', 'R2', 12);
insert into class values('class3', '12/11/15 10:15:25', 'R3', 11);
insert into class values('class4', '12/11/15 20:15:20', 'R4', 14);
insert into class values('class5', '12/11/15 20:15:20', 'R3', 15);
insert into class values('class6', '12/11/15 13:20:20', 'R2', 14);
insert into class values('class7', '12/11/15 10:10:10', 'R3', 14);
select * from class;
```

cname	meets_at	room	fid
class1	2012-11-15 10:15:16	R1	14
class10	2012-11-15 10:15:16	R128	14
class2	2012-11-15 10:15:20	R2	12
class3	2012-11-15 10:15:25	R3	11
class4	2012-11-15 20:15:20	R4	14
class5	2012-11-15 20:15:20	R3	15
class6	2012-11-15 13:20:20	R2	14
class7	2012-11-15 10:10:10	R3	14
NULL	NULL	NULL	NULL

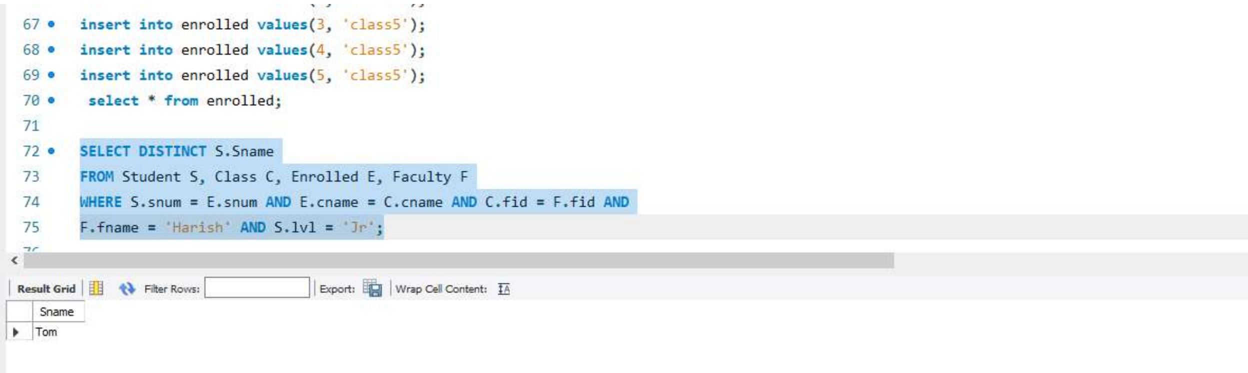
INSERT INTO ENROLLED VALUES(1, 'class1');
INSERT INTO ENROLLED VALUES(2, 'class1');
INSERT INTO ENROLLED VALUES(3, 'class3');
INSERT INTO ENROLLED VALUES(4, 'class3');
INSERT INTO ENROLLED VALUES(5, 'class4');
INSERT INTO ENROLLED VALUES(1, 'class5');
INSERT INTO ENROLLED VALUES(2, 'class5');
INSERT INTO ENROLLED VALUES(3, 'class5');
INSERT INTO ENROLLED VALUES(4, 'class5');
INSERT INTO ENROLLED VALUES(5, 'class5');
select * from enrolled;



```
insert into enrolled values(2, 'class1');
insert into enrolled values(3, 'class3');
insert into enrolled values(4, 'class3');
insert into enrolled values(5, 'class4');
insert into enrolled values(1, 'class5');
insert into enrolled values(2, 'class5');
insert into enrolled values(3, 'class5');
insert into enrolled values(4, 'class5');
insert into enrolled values(5, 'class5');
 select * from enrolled;
```

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

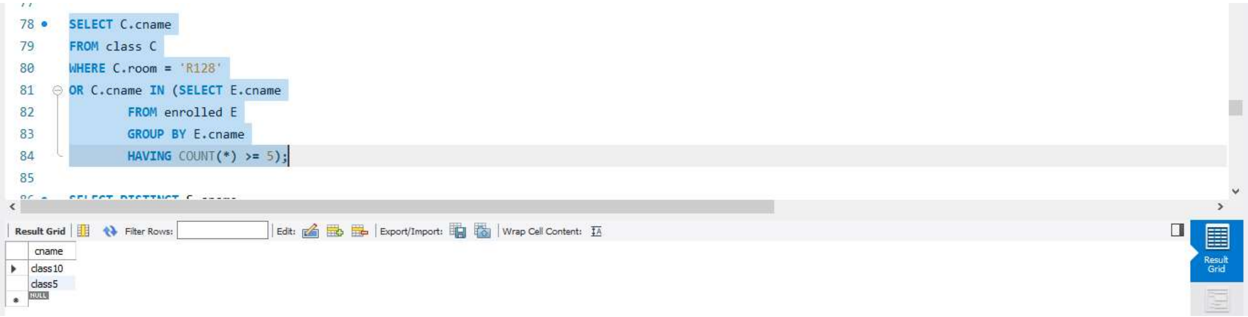
```
SELECT DISTINCT S.Sname
FROM Student S, Class C, Enrolled E, Faculty F
WHERE S.snum = E.snum AND E.cname = C.cname AND C.fid = F.fid AND
F.fname = 'Harish' AND S.lvl = 'Jr';
```



```
insert into enrolled values(3, 'class5');
insert into enrolled values(4, 'class5');
insert into enrolled values(5, 'class5');
 select * from enrolled;

SELECT DISTINCT S.Sname
FROM Student S, Class C, Enrolled E, Faculty F
WHERE S.snum = E.snum AND E.cname = C.cname AND C.fid = F.fid AND
F.fname = 'Harish' AND S.lvl = 'Jr';
```

```
Sname
Tom
```

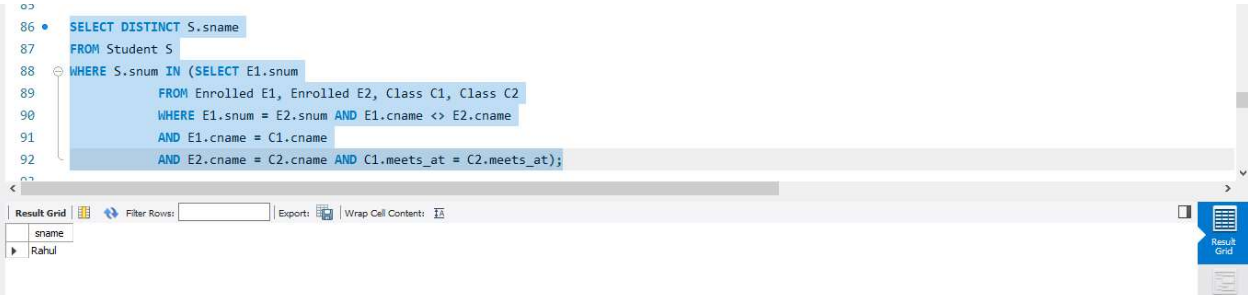
```
SELECT C.cname
FROM class C
WHERE C.room = 'R128'
OR C.cname IN (SELECT E.cname
                FROM enrolled E
                GROUP BY E.cname
                HAVING COUNT(*) >= 5);
```



```
SELECT C.cname
FROM class C
WHERE C.room = 'R128'
OR C.cname IN (SELECT E.cname
        FROM enrolled E
        GROUP BY E.cname
        HAVING COUNT(*) >= 5);
```

```
cname
class10
class5
NULL
```

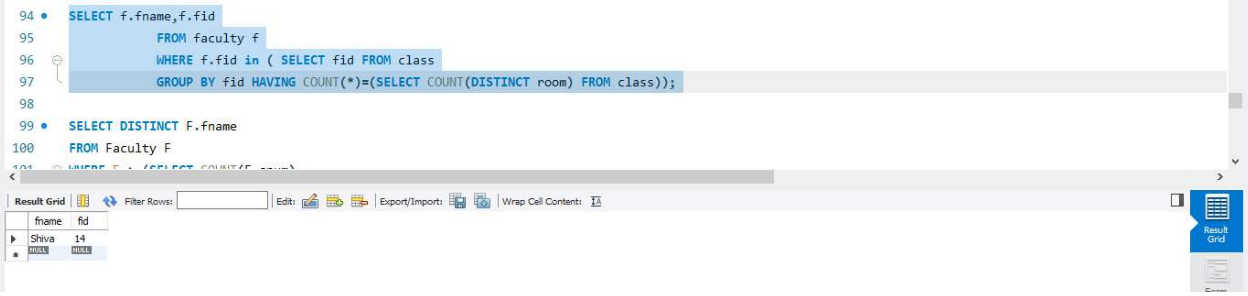
```
SELECT DISTINCT S.sname
FROM Student S
WHERE S.snum IN (SELECT E1.snum
                FROM Enrolled E1, Enrolled E2, Class C1, Class C2
                WHERE E1.snum = E2.snum AND E1.cname <> E2.cname
                AND E1.cname = C1.cname
                AND E2.cname = C2.cname AND C1.meets_at = C2.meets_at);
```



```
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.cname
            AND E1.cname = C1.cname
            AND E2.cname = C2.cname AND C1.meets_at = C2.meets_at);
```

```
sname
Rahul
```

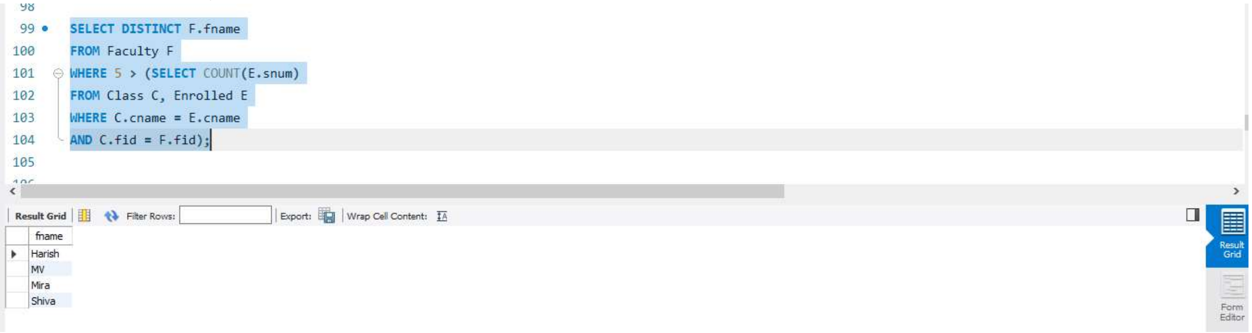
SELECT f.fname,f.fid
FROM faculty f
WHERE f.fid in (SELECT fid FROM class
GROUP BY fid
HAVING COUNT(*)=(SELECT COUNT(DISTINCT room) FROM class));



```
SELECT f.fname,f.fid
            FROM faculty f
            WHERE f.fid in ( SELECT fid FROM class
            GROUP BY fid HAVING COUNT(*)=(SELECT COUNT(DISTINCT room) FROM class));

SELECT DISTINCT F.fname
FROM Faculty F
```

```
fname   fid
Shiva   14
NULL    NULL
```

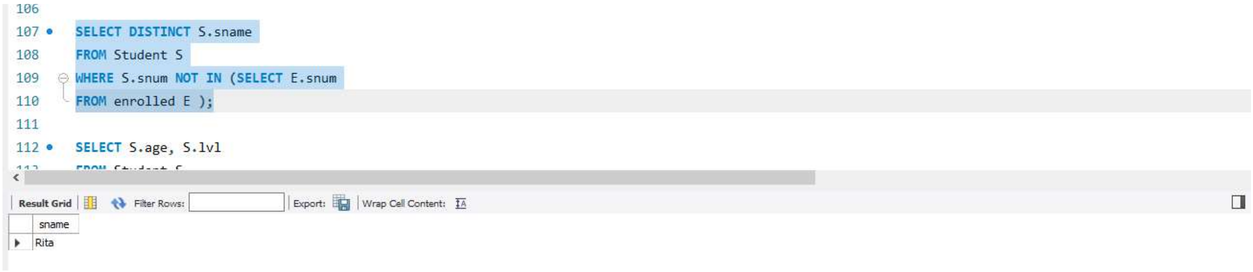
SELECT DISTINCT F.fname
FROM Faculty F
WHERE 5 > (SELECT COUNT(E.snum)
FROM Class C, Enrolled E
WHERE C.cname = E.cname
AND C.fid = F.fid);



```
SELECT DISTINCT F.fname
FROM Faculty F
WHERE 5 > (SELECT COUNT(E.snum)
FROM Class C, Enrolled E
WHERE C.cname = E.cname
AND C.fid = F.fid);
```

```
fname
Harish
MV
Mira
Shiva
```

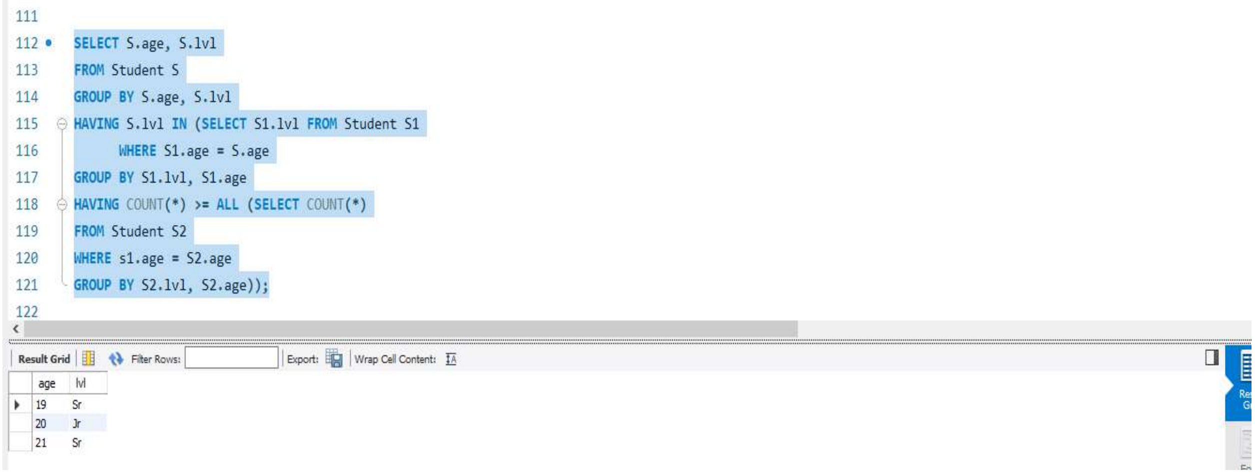
SELECT DISTINCT S.sname
FROM Student S
WHERE S.snum NOT IN (SELECT E.snum
FROM enrolled E);



```
SELECT DISTINCT S.sname
FROM Student S
WHERE S.snum NOT IN (SELECT E.snum
FROM enrolled E );

SELECT S.age, S.lvl
FROM Student S
```

sname
Rita

```
SELECT S.age, S.lvl
FROM Student S
GROUP BY S.age, S.lvl
HAVING S.lvl IN (SELECT S1.lvl FROM Student S1
    WHERE S1.age = S.age
GROUP BY S1.lvl, S1.age
HAVING COUNT(*) >= ALL (SELECT COUNT(*)
FROM Student S2
WHERE s1.age = S2.age
GROUP BY S2.lvl, S2.age));
```



```
SELECT S.age, S.lvl
FROM Student S
GROUP BY S.age, S.lvl
HAVING S.lvl IN (SELECT S1.lvl FROM Student S1
      WHERE S1.age = S.age
GROUP BY S1.lvl, S1.age
HAVING COUNT(*) >= ALL (SELECT COUNT(*)
FROM Student S2
WHERE s1.age = S2.age
GROUP BY S2.lvl, S2.age));
```

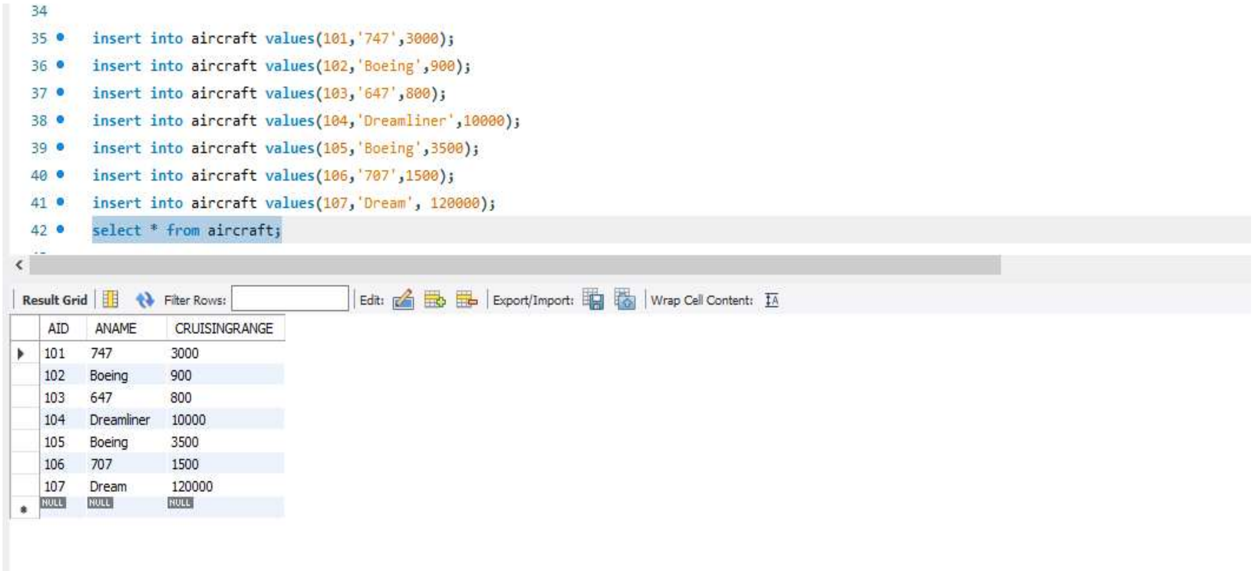
age	lvl
19	Sr
20	Jr
21	Sr

LAB-5: AIRLINE FLIGHT DATABASE

USN: 1BM19CS168

NAME: SWETHA PATIL

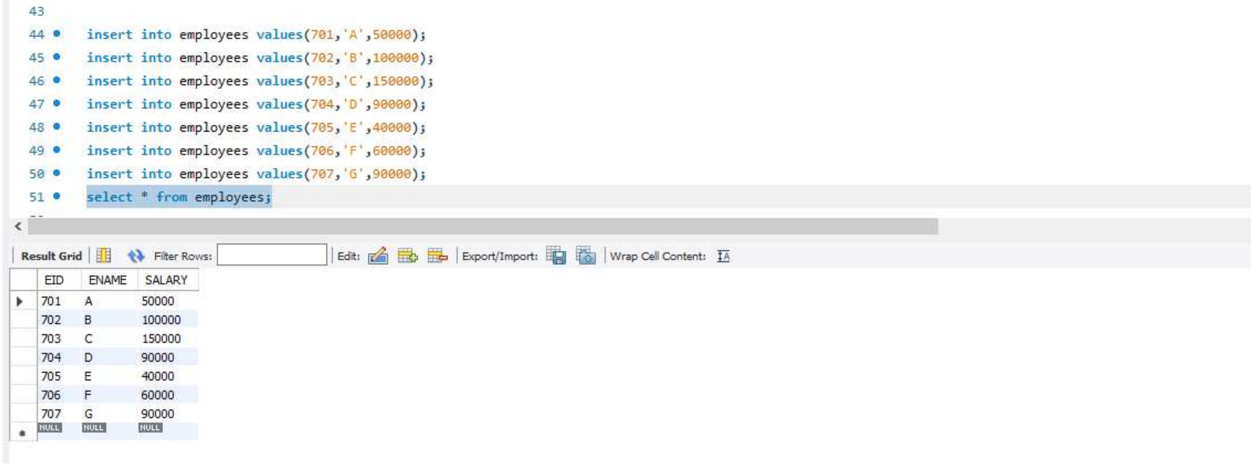
```
create database flights;
 use flights;

 CREATE TABLE FLIGHTS
  (FLNO INTEGER PRIMARY KEY,
  FFROM VARCHAR(15) ,
  TTO VARCHAR(15) ,
  DISTANCE INTEGER,
  DEPARTS TIMESTAMP,
  ARRIVES TIMESTAMP,
  PRICE INTEGER );
DESC FLIGHTS;

CREATE TABLE AIRCRAFT
  (AID INTEGER PRIMARY KEY,
  ANAME VARCHAR(10),
  CRUISINGRANGE INTEGER);
 DESC AIRCRAFT;

 CREATE TABLE EMPLOYEES
  (EID INTEGER PRIMARY KEY,
  ENAME VARCHAR(15),
  SALARY INTEGER );
DESC EMPLOYEES;

CREATE TABLE CERTIFIED
  (EID INTEGER NOT NULL,
  AID INTEGER NOT NULL,
  PRIMARY KEY (EID, AID),
  FOREIGN KEY (EID) REFERENCES EMPLOYEES (EID),
  FOREIGN KEY (AID) REFERENCES AIRCRAFT (AID));
 DESC CERTIFIED;
COMMIT;

insert into aircraft values(101,'747',3000);
insert into aircraft values(102,'Boeing',900);
insert into aircraft values(103,'647',800);
insert into aircraft values(104,'Dreamliner',10000);
insert into aircraft values(105,'Boeing',3500);
insert into aircraft values(106,'707',1500);
insert into aircraft values(107,'Dream', 120000);
select * from aircraft;
```



```
insert into aircraft values(101,'747',3000);
insert into aircraft values(102,'Boeing',900);
insert into aircraft values(103,'647',800);
insert into aircraft values(104,'Dreamliner',10000);
insert into aircraft values(105,'Boeing',3500);
insert into aircraft values(106,'707',1500);
insert into aircraft values(107,'Dream', 120000);
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
NULL	NULL	NULL

insert into employees values(701,'A',50000);
insert into employees values(702,'B',100000);
insert into employees values(703,'C',150000);
insert into employees values(704,'D',90000);
insert into employees values(705,'E',40000);
insert into employees values(706,'F',60000);
insert into employees values(707,'G',90000);
select * from employees;

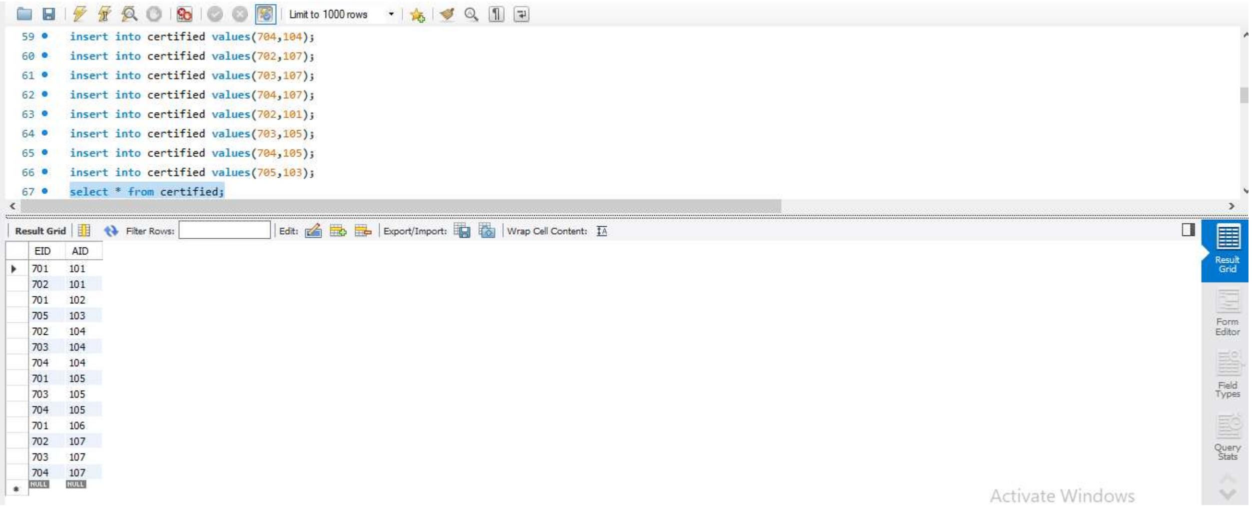


```
insert into employees values(701,'A',50000);
insert into employees values(702,'B',100000);
insert into employees values(703,'C',150000);
insert into employees values(704,'D',90000);
insert into employees values(705,'E',40000);
insert into employees values(706,'F',60000);
insert into employees values(707,'G',90000);
select * from employees;
```

EID	ENAME	SALARY
701	A	50000
702	B	100000
703	C	150000
704	D	90000
705	E	40000
706	F	60000
707	G	90000
NULL	NULL	NULL

insert into certified values(701,101);
insert into certified values(701,102);
insert into certified values(701,106);
insert into certified values(701,105);
insert into certified values(702,104);
insert into certified values(703,104);
insert into certified values(704,104);

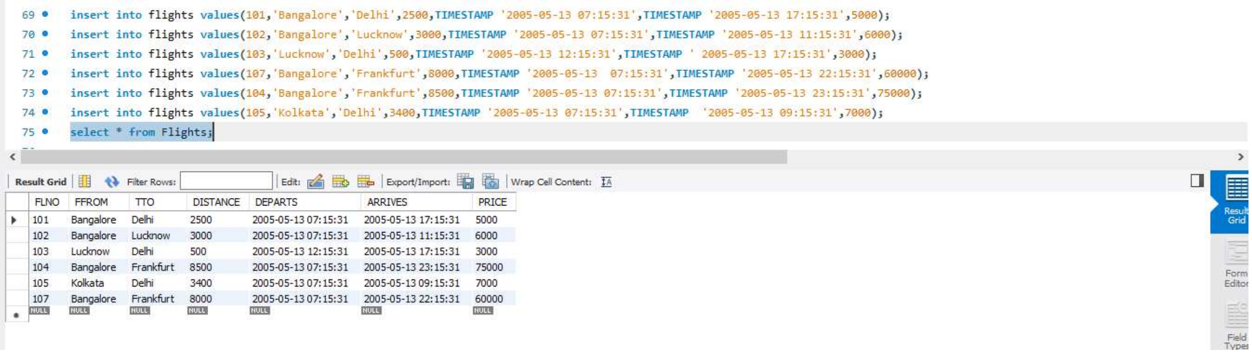
insert into certified values(702,107);
insert into certified values(703,107);
insert into certified values(704,107);
insert into certified values(702,101);
insert into certified values(703,105);
insert into certified values(704,105);
insert into certified values(705,103);
select * from certified;



```
insert into certified values(704,104);
insert into certified values(702,107);
insert into certified values(703,107);
insert into certified values(704,107);
insert into certified values(702,101);
insert into certified values(703,105);
insert into certified values(704,105);
insert into certified values(705,103);
select * from certified;
```

EID	AID
701	101
702	101
701	102
705	103
702	104
703	104
704	104
701	105
703	105
704	105
701	106
702	107
703	107
704	107
NULL	NULL

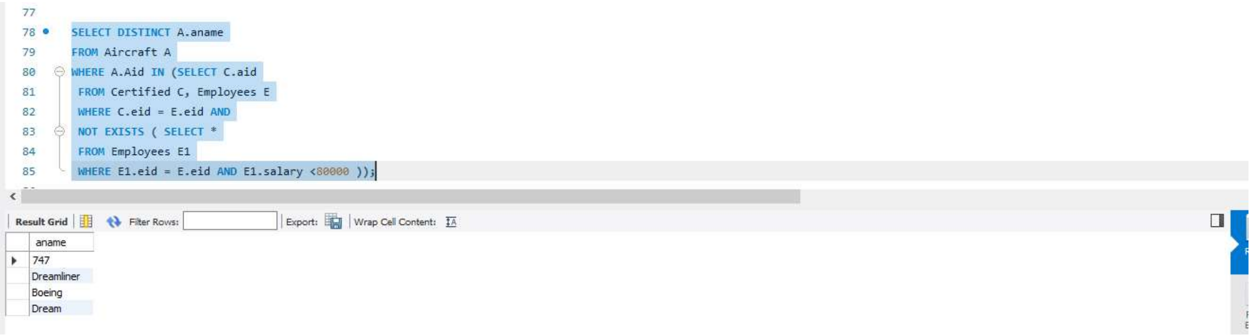
insert into flights values(101,'Bangalore','Delhi',2500,TIMESTAMP '2005-05-13 07:15:31',TIMESTAMP '2005-05-13 17:15:31',5000);
insert into flights values(102,'Bangalore','Lucknow',3000,TIMESTAMP '2005-05-13 07:15:31',TIMESTAMP '2005-05-13 11:15:31',6000);
insert into flights values(103,'Lucknow','Delhi',500,TIMESTAMP '2005-05-13 12:15:31',TIMESTAMP ' 2005-05-13 17:15:31',3000);
insert into flights values(107,'Bangalore','Frankfurt',8000,TIMESTAMP '2005-05-13 07:15:31',TIMESTAMP '2005-05-13 22:15:31',60000);
insert into flights values(104,'Bangalore','Frankfurt',8500,TIMESTAMP '2005-05-13 07:15:31',TIMESTAMP '2005-05-13 23:15:31',75000);
insert into flights values(105,'Kolkata','Delhi',3400,TIMESTAMP '2005-05-13 07:15:31',TIMESTAMP '2005-05-13 09:15:31',7000);
select * from Flights;



```
insert into flights values(101,'Bangalore','Delhi',2500,TIMESTAMP '2005-05-13 07:15:31',TIMESTAMP '2005-05-13 17:15:31',5000);
insert into flights values(102,'Bangalore','Lucknow',3000,TIMESTAMP '2005-05-13 07:15:31',TIMESTAMP '2005-05-13 11:15:31',6000);
insert into flights values(103,'Lucknow','Delhi',500,TIMESTAMP '2005-05-13 12:15:31',TIMESTAMP ' 2005-05-13 17:15:31',3000);
insert into flights values(107,'Bangalore','Frankfurt',8000,TIMESTAMP '2005-05-13  07:15:31',TIMESTAMP '2005-05-13 22:15:31',60000);
insert into flights values(104,'Bangalore','Frankfurt',8500,TIMESTAMP '2005-05-13 07:15:31',TIMESTAMP '2005-05-13 23:15:31',75000);
insert into flights values(105,'Kolkata','Delhi',3400,TIMESTAMP '2005-05-13 07:15:31',TIMESTAMP  '2005-05-13 09:15:31',7000);
select * from Flights;
```

FLNO	FFROM	TTO	DISTANCE	DEPARTS	ARRIVES	PRICE
101	Bangalore	Delhi	2500	2005-05-13 07:15:31	2005-05-13 17:15:31	5000
102	Bangalore	Lucknow	3000	2005-05-13 07:15:31	2005-05-13 11:15:31	6000
103	Lucknow	Delhi	500	2005-05-13 12:15:31	2005-05-13 17:15:31	3000
104	Bangalore	Frankfurt	8500	2005-05-13 07:15:31	2005-05-13 23:15:31	75000
105	Kolkata	Delhi	3400	2005-05-13 07:15:31	2005-05-13 09:15:31	7000
107	Bangalore	Frankfurt	8000	2005-05-13 07:15:31	2005-05-13 22:15:31	60000
NULL	NULL	NULL	NULL	NULL	NULL	NULL

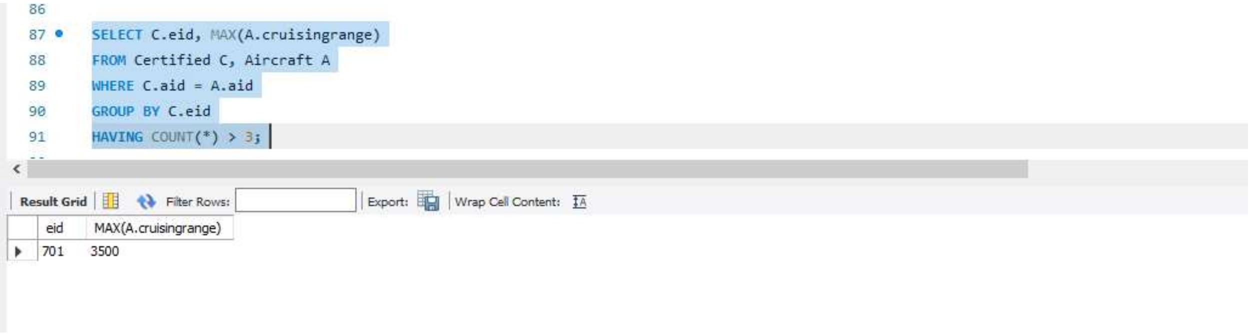
```
SELECT DISTINCT A.aname
FROM Aircraft A
WHERE A.Aid IN (SELECT C.aid
 FROM Certified C, Employees E
 WHERE C.eid = E.eid AND
 NOT EXISTS ( SELECT *
 FROM Employees E1
 WHERE E1.eid = E.eid AND E1.salary <80000 ));
```



```
SELECT DISTINCT A.aname
FROM Aircraft A
WHERE A.Aid IN (SELECT C.aid
 FROM Certified C, Employees E
 WHERE C.eid = E.eid AND
 NOT EXISTS ( SELECT *
 FROM Employees E1
 WHERE E1.eid = E.eid AND E1.salary <80000 ));
```

```
aname
747
Dreamliner
Boeing
Dream
```

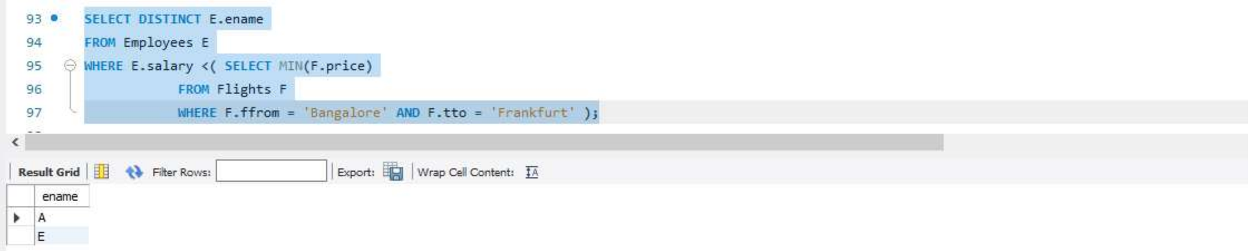
```
SELECT C.eid, MAX(A.cruisingrange)
FROM Certified C, Aircraft A
WHERE C.aid = A.aid
GROUP BY C.eid
HAVING COUNT(*) > 3;
```



```
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
```

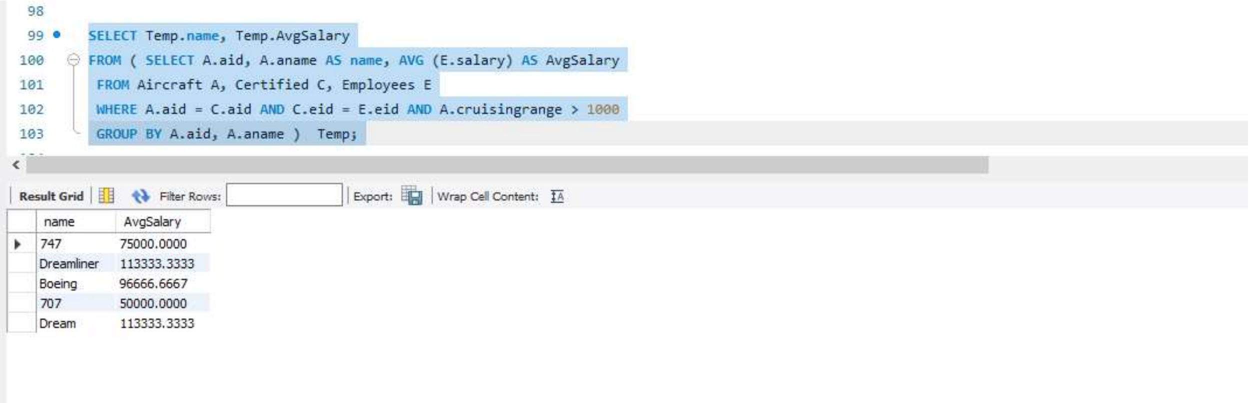
```
SELECT DISTINCT E.ename
FROM Employees E
WHERE E.salary <( SELECT MIN(F.price)
                  FROM Flights F
                  WHERE F.ffrom = 'Bangalore' AND F.tto = 'Frankfurt' );
```



```
SELECT DISTINCT E.ename
FROM Employees E
WHERE E.salary <( SELECT MIN(F.price)
              FROM Flights F
              WHERE F.ffrom = 'Bangalore' AND F.tto = 'Frankfurt' );
```

```
ename
A
E
```

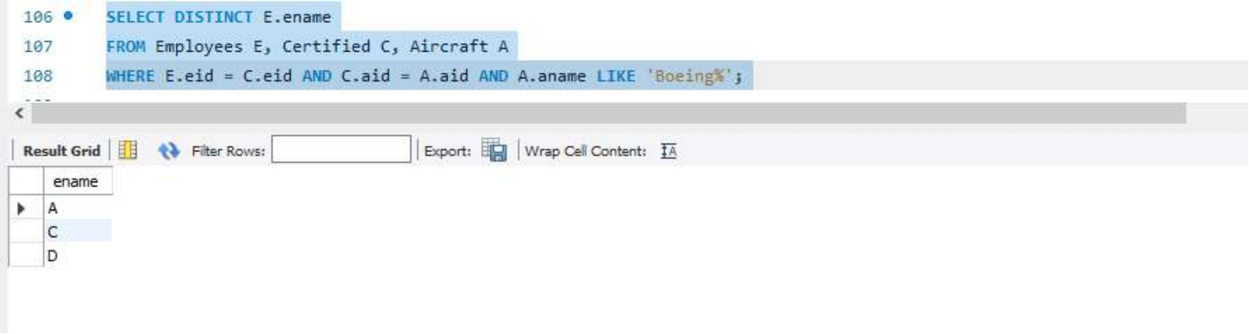
```
SELECT Temp.name, Temp.AvgSalary
FROM ( SELECT A.aid, A.aname AS name, AVG (E.salary) AS AvgSalary
 FROM Aircraft A, Certified C, Employees E
 WHERE A.aid = C.aid AND C.eid = E.eid AND A.cruisingrange > 1000
 GROUP BY A.aid, A.aname )  Temp;
```



```
SELECT Temp.name, Temp.AvgSalary
FROM ( SELECT A.aid, A.aname AS name, AVG (E.salary) AS AvgSalary
 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 )  Temp;
```

name	AvgSalary
747	75000.0000
Dreamliner	113333.3333
Boeing	96666.6667
707	50000.0000
Dream	113333.3333

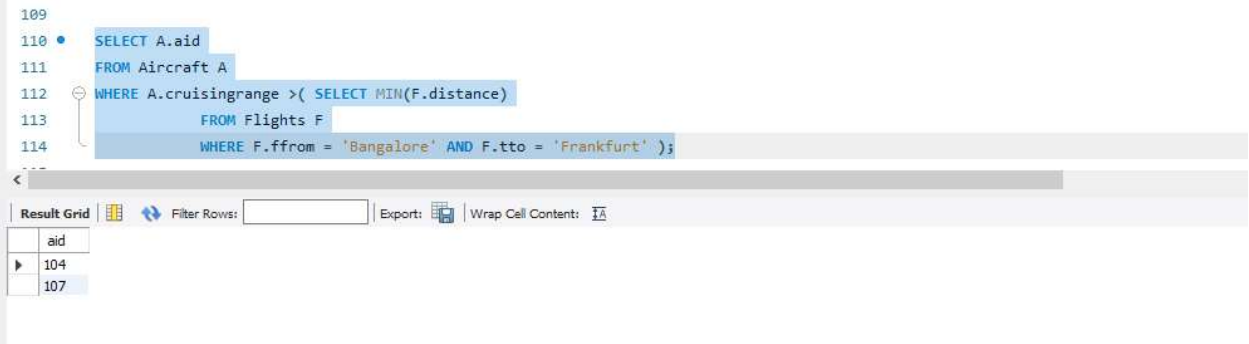
```
SELECT DISTINCT E.ename
FROM Employees E, Certified C, Aircraft A
WHERE E.eid = C.eid AND C.aid = A.aid AND A.aname LIKE 'Boeing%';
```



```
SELECT DISTINCT E.ename
FROM Employees E, Certified C, Aircraft A
WHERE E.eid = C.eid AND C.aid = A.aid AND A.aname LIKE 'Boeing%';
```

ename
A
C
D

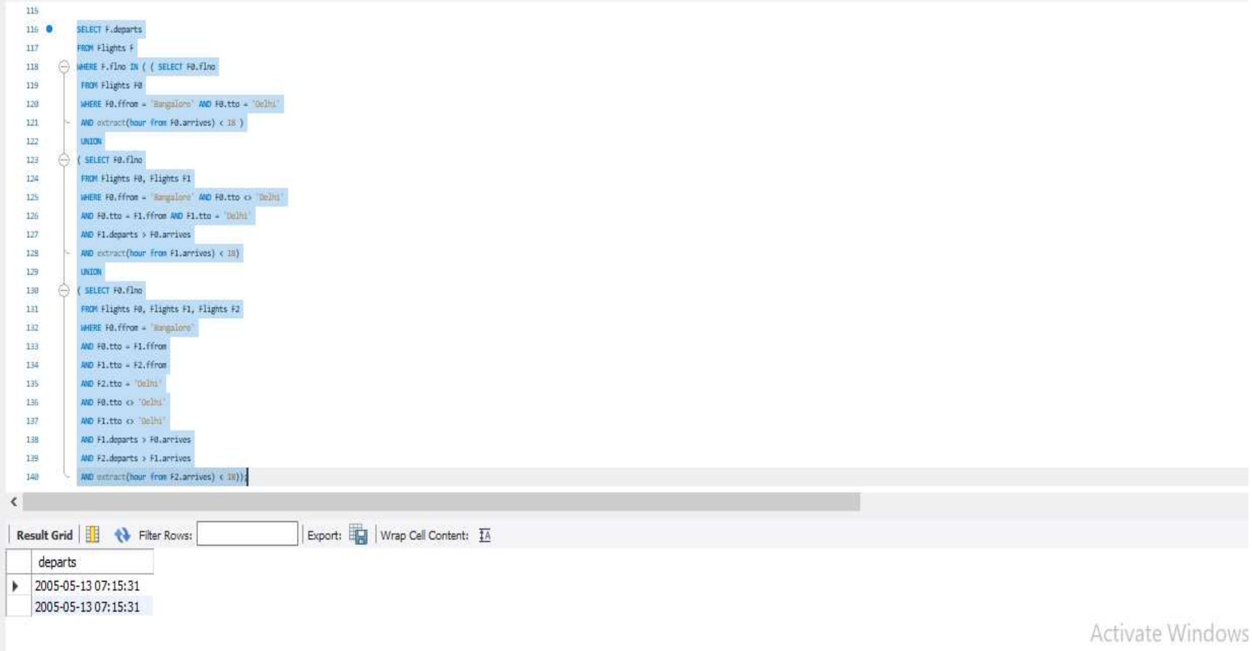
```
SELECT A.aid
FROM Aircraft A
WHERE A.cruisingrange >( SELECT MIN(F.distance)
                                           FROM Flights F
                                           WHERE F.ffrom = 'Bangalore' AND F.tto = 'Frankfurt' );
```



```
SELECT A.aid
FROM Aircraft A
WHERE A.cruisingrange >( SELECT MIN(F.distance)
            FROM Flights F
            WHERE F.ffrom = 'Bangalore' AND F.tto = 'Frankfurt' );
```

aid
104
107

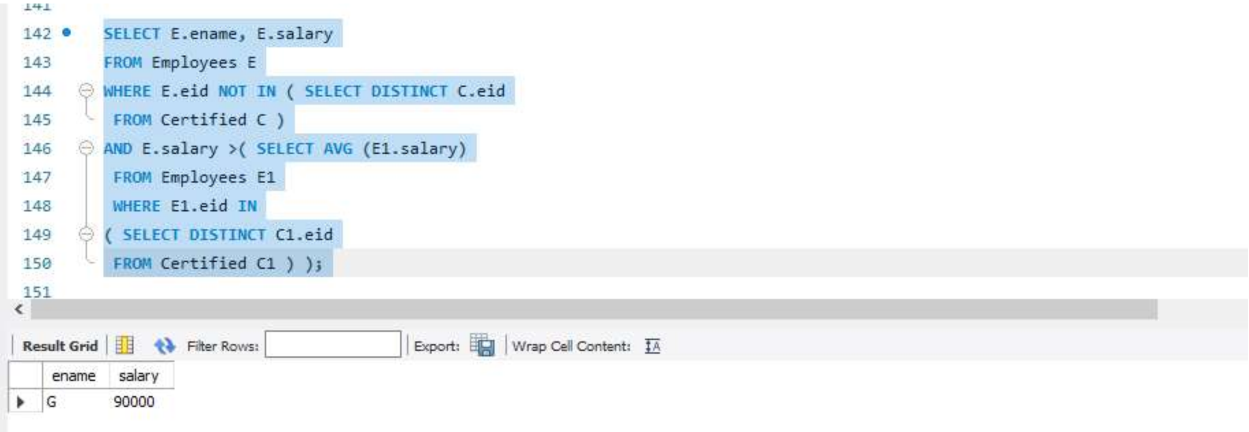
```
SELECT F.departs
FROM Flights F
WHERE F.flno IN ( ( SELECT F0.flno
 FROM Flights F0
 WHERE F0.ffrom = 'Bangalore' AND F0.tto = 'Delhi'
 AND extract(hour from F0.arrives) < 18 )
 UNION
( SELECT F0.flno
 FROM Flights F0, Flights F1
 WHERE F0.ffrom = 'Bangalore' AND F0.tto <> 'Delhi'
 AND F0.tto = F1.ffrom 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));
```



```
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));
```

departs
2005-05-13 07:15:31
2005-05-13 07:15:31

```
SELECT E.ename, E.salary
FROM Employees E
WHERE E.eid NOT IN ( SELECT DISTINCT C.eid
 FROM Certified C )
AND E.salary >( SELECT AVG (E1.salary)
 FROM Employees E1
 WHERE E1.eid IN
( SELECT DISTINCT C1.eid
 FROM Certified C1 ) );
```



```
SELECT E.ename, E.salary
FROM Employees E
WHERE E.eid NOT IN ( SELECT DISTINCT C.eid
 FROM Certified C )
AND E.salary >( SELECT AVG (E1.salary)
 FROM Employees E1
 WHERE E1.eid IN
( SELECT DISTINCT C1.eid
 FROM Certified C1 ) );
```

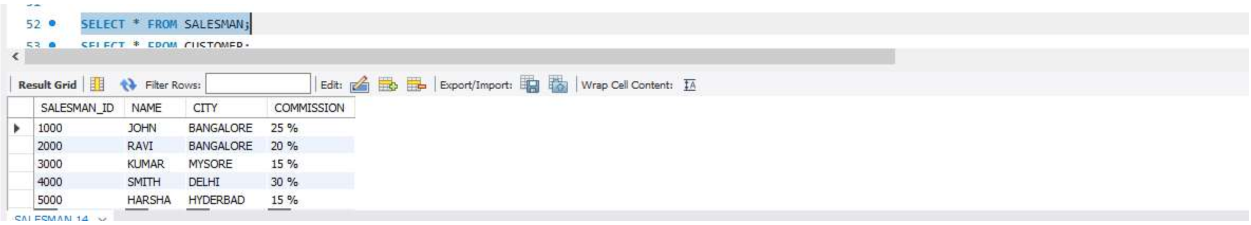
ename	salary
G	90000

LAB-6: ORDER DATABASE

USN: 1BM19CS168

NAME:SWETHA PATIL

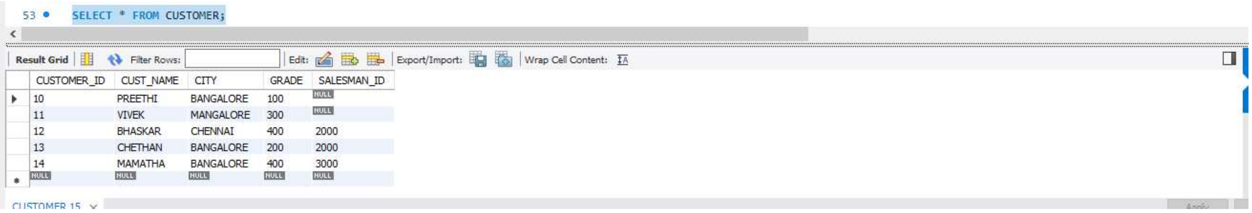
```
CREATE DATABASE ORDER_;
USE ORDER_;

CREATE TABLE SALESMAN
(SALESMAN_ID INT(4),
NAME VARCHAR(20),
CITY VARCHAR(20),
COMMISSION VARCHAR(20),
PRIMARY KEY (SALESMAN_ID));

CREATE TABLE CUSTOMER
(CUSTOMER_ID INT,
CUST_NAME VARCHAR(20),
CITY VARCHAR(20),
GRADE INT,
SALESMAN_ID INT,
PRIMARY KEY (CUSTOMER_ID),
foreign key(SALESMAN_ID) REFERENCES SALESMAN(SALESMAN_ID) ON DELETE SET NULL);
desc customer;


CREATE TABLE ORDERS
(ORD_NO INT(5),
PURCHASE_AMT FLOAT,
ORD_DATE DATE,
CUSTOMER_ID INT,
SALESMAN_ID INT,
PRIMARY KEY (ORD_NO),
foreign key(CUSTOMER_ID) REFERENCES CUSTOMER(CUSTOMER_ID) ON DELETE CASCADE,
foreign key(SALESMAN_ID) REFERENCES SALESMAN(SALESMAN_ID) ON DELETE CASCADE);
desc orders;

INSERT INTO SALESMAN VALUES (1000, 'JOHN','BANGALORE','25 %');
INSERT INTO SALESMAN VALUES (2000, 'RAVI','BANGALORE','20 %');
INSERT INTO SALESMAN VALUES (3000, 'KUMAR','MYSORE','15 %');
INSERT INTO SALESMAN VALUES (4000, 'SMITH','DELHI','30 %');
INSERT INTO SALESMAN VALUES (5000, 'HARSHA','HYDERBAD','15 %');
SELECT * FROM SALESMAN;
```



```
SELECT * FROM SALESMAN;
SELECT * FROM CUSTOMER;
```

SALESMAN_ID	NAME	CITY	COMMISSION
1000	JOHN	BANGALORE	25 %
2000	RAVI	BANGALORE	20 %
3000	KUMAR	MYSORE	15 %
4000	SMITH	DELHI	30 %
5000	HARSHA	HYDERBAD	15 %

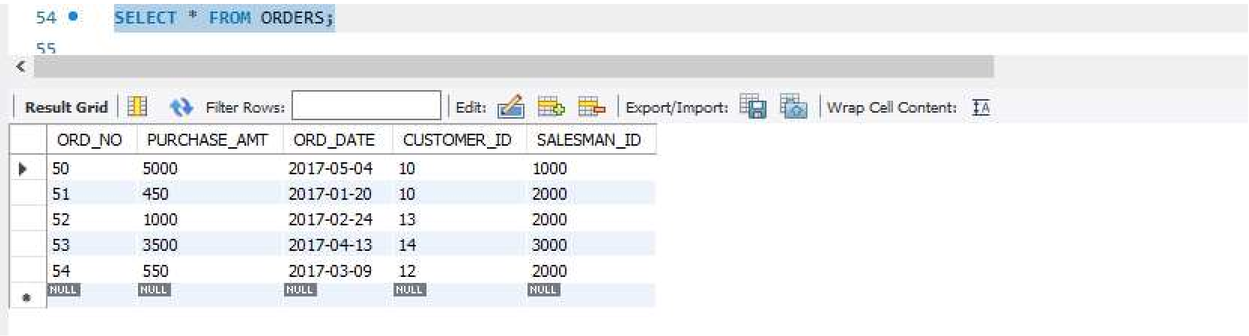
```
INSERT INTO CUSTOMER VALUES (10, 'PREETHI','BANGALORE', 100, 1000);
INSERT INTO CUSTOMER VALUES (11, 'VIVEK','MANGALORE', 300, 1000);
INSERT INTO CUSTOMER VALUES (12, 'BHASKAR','CHENNAI', 400, 2000);
INSERT INTO CUSTOMER VALUES (13, 'CHETHAN','BANGALORE', 200, 2000);
INSERT INTO CUSTOMER VALUES (14, 'MAMATHA','BANGALORE', 400, 3000);
SELECT * FROM CUSTOMER;
```



```
SELECT * FROM CUSTOMER;
```

CUSTOMER_ID	CUST_NAME	CITY	GRADE	SALESMAN_ID
10	PREETHI	BANGALORE	100	NULL
11	VIVEK	MANGALORE	300	NULL
12	BHASKAR	CHENNAI	400	2000
13	CHETHAN	BANGALORE	200	2000
14	MAMATHA	BANGALORE	400	3000
NULL	NULL	NULL	NULL	NULL

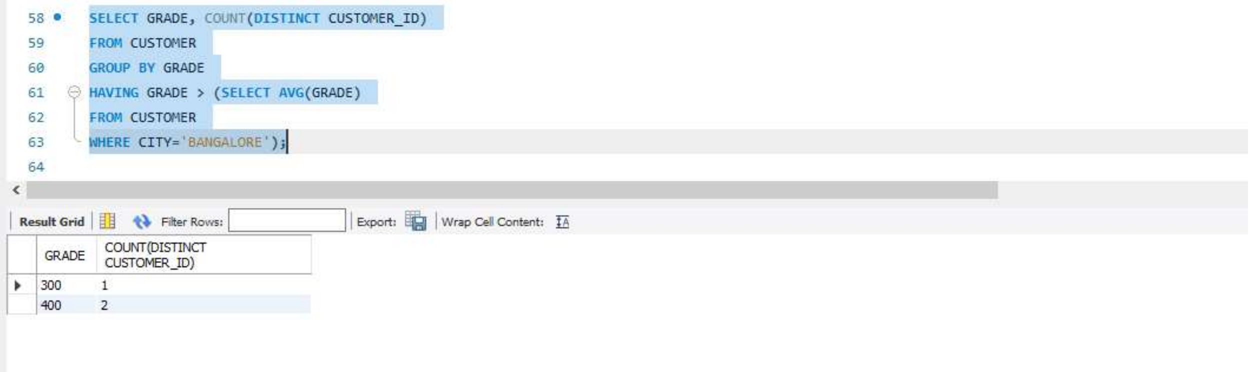
```
INSERT INTO ORDERS VALUES (50, 5000, '2017-05-04', 10, 1000);
INSERT INTO ORDERS VALUES (51, 450, '2017-01-20', 10, 2000);
INSERT INTO ORDERS VALUES (52, 1000, '2017-02-24', 13, 2000);
INSERT INTO ORDERS VALUES (53, 3500, '2017-04-13', 14, 3000);
INSERT INTO ORDERS VALUES (54, 550, '2017-03-09', 12, 2000);
SELECT * FROM ORDERS;
```



```
SELECT * FROM ORDERS;
```

ORD_NO	PURCHASE_AMT	ORD_DATE	CUSTOMER_ID	SALESMAN_ID
50	5000	2017-05-04	10	1000
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
NULL	NULL	NULL	NULL	NULL

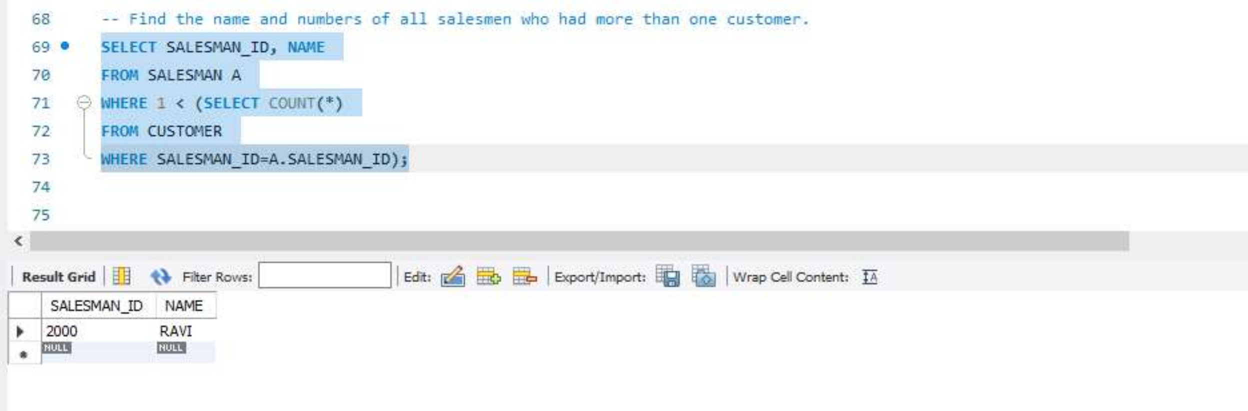
```
-- Count the customers with grades above Bangalore’s average.
SELECT GRADE, COUNT(DISTINCT CUSTOMER_ID)
FROM CUSTOMER
GROUP BY GRADE
HAVING GRADE > (SELECT AVG(GRADE)
FROM CUSTOMER
WHERE CITY='BANGALORE');
```



```
SELECT GRADE, COUNT(DISTINCT CUSTOMER_ID)
FROM CUSTOMER
GROUP BY GRADE
HAVING GRADE > (SELECT AVG(GRADE)
FROM CUSTOMER
WHERE CITY='BANGALORE');
```

GRADE	COUNT(DISTINCT CUSTOMER_ID)
300	1
400	2

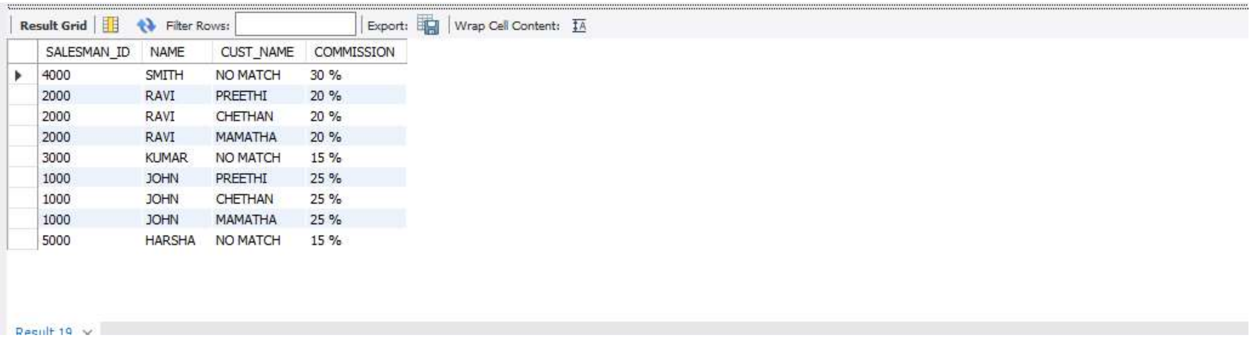
-- Find the name and numbers of all salesmen who had more than one customer.
SELECT SALESMAN_ID, NAME
FROM SALESMAN A
WHERE 1 < (SELECT COUNT(*)
FROM CUSTOMER
WHERE SALESMAN_ID=A.SALESMAN_ID);



```
-- Find the name and numbers of all salesmen who had more than one customer.
SELECT SALESMAN_ID, NAME
FROM SALESMAN A
WHERE 1 < (SELECT COUNT(*)
FROM CUSTOMER
WHERE SALESMAN_ID=A.SALESMAN_ID);
```

SALESMAN_ID	NAME
2000	RAVI
NULL	NULL

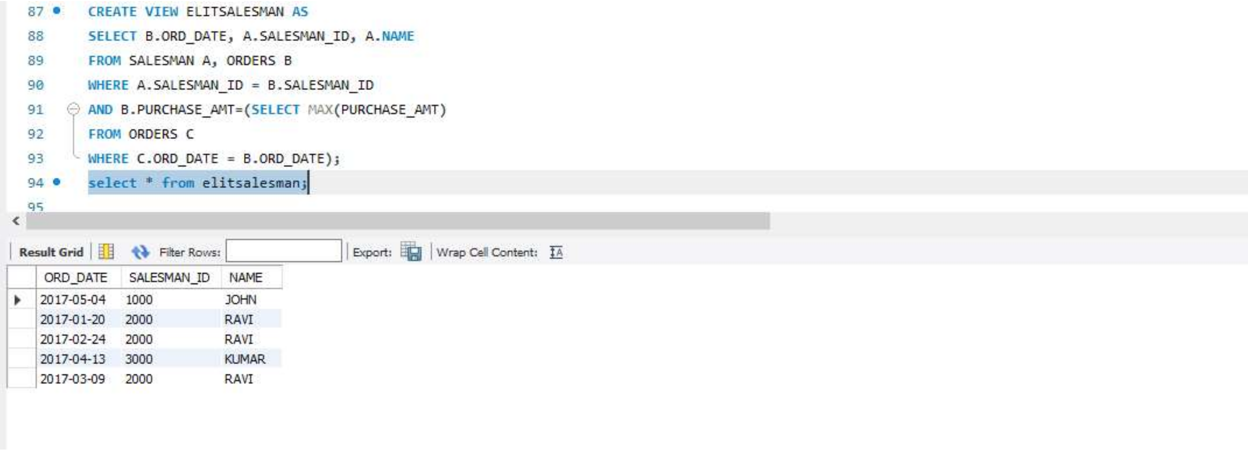
-- List all salesmen and indicate those who have and don’t have customers in their cities (Use UNION operation.)
SELECT SALESMAN.SALESMAN_ID, NAME, CUST_NAME, COMMISSION
FROM SALESMAN, CUSTOMER
WHERE SALESMAN.CITY = CUSTOMER.CITY
UNION
SELECT SALESMAN_ID, NAME, 'NO MATCH', COMMISSION
FROM SALESMAN
WHERE NOT CITY = ANY
(SELECT CITY
FROM CUSTOMER)
ORDER BY 2 DESC;



SALESMAN_ID	NAME	CUST_NAME	COMMISSION
4000	SMITH	NO MATCH	30 %
2000	RAVI	PREETHI	20 %
2000	RAVI	CHETHAN	20 %
2000	RAVI	MAMATHA	20 %
3000	KUMAR	NO MATCH	15 %
1000	JOHN	PREETHI	25 %
1000	JOHN	CHETHAN	25 %
1000	JOHN	MAMATHA	25 %
5000	HARSHA	NO MATCH	15 %

-- Create a view that finds the salesman who has the customer with the highest order of a day.
CREATE VIEW ELITSALESMAN AS
SELECT B.ORD_DATE, A.SALESMAN_ID, A.NAME

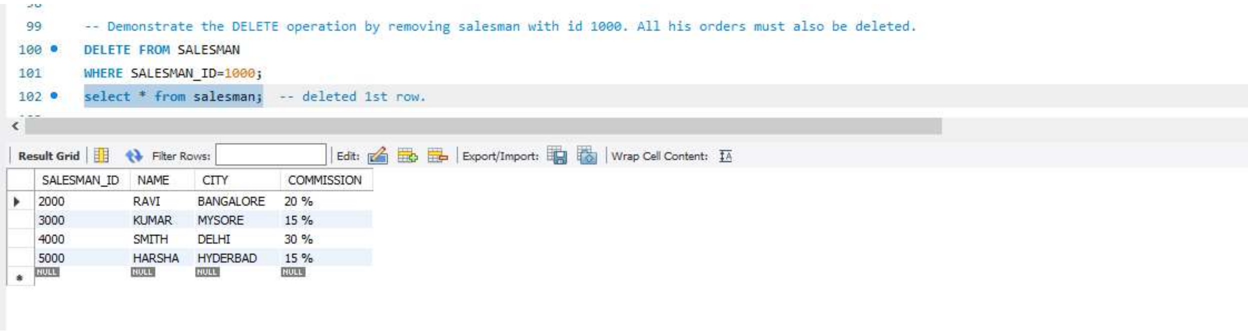
FROM SALESMAN A, ORDERS B
WHERE A.SALESMAN_ID = B.SALESMAN_ID
AND B.PURCHASE_AMT=(SELECT MAX(PURCHASE_AMT)
FROM ORDERS C
WHERE C.ORD_DATE = B.ORD_DATE);
select * from elitsalesman;



```
CREATE VIEW ELITSALESMAN AS
SELECT B.ORD_DATE, A.SALESMAN_ID, A.NAME
FROM SALESMAN A, ORDERS B
WHERE A.SALESMAN_ID = B.SALESMAN_ID
AND B.PURCHASE_AMT=(SELECT MAX(PURCHASE_AMT)
FROM ORDERS C
WHERE C.ORD_DATE = B.ORD_DATE);
select * from elitsalesman;
```

ORD_DATE	SALESMAN_ID	NAME
2017-05-04	1000	JOHN
2017-01-20	2000	RAVI
2017-02-24	2000	RAVI
2017-04-13	3000	KUMAR
2017-03-09	2000	RAVI

-- Demonstrate the DELETE operation by removing salesman with id 1000. All his orders must also be deleted.
DELETE FROM SALESMAN
WHERE SALESMAN_ID=1000;
select * from salesman; -- deleted 1st row.



```
-- Demonstrate the DELETE operation by removing salesman with id 1000. All his orders must also be deleted.
DELETE FROM SALESMAN
WHERE SALESMAN_ID=1000;
select * from salesman;  -- deleted 1st row.
```

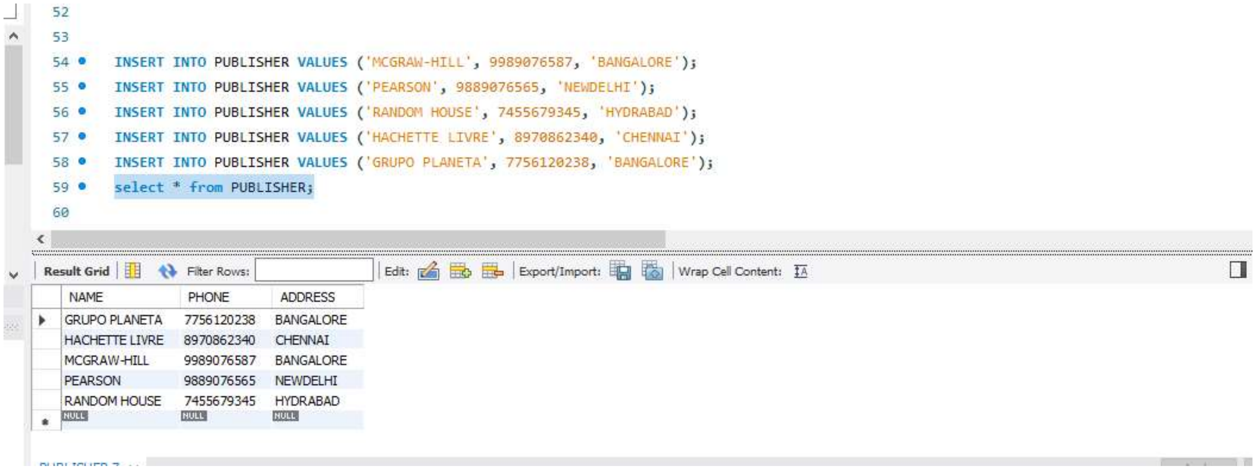
SALESMAN_ID	NAME	CITY	COMMISSION
2000	RAVI	BANGALORE	20 %
3000	KUMAR	MYSORE	15 %
4000	SMITH	DELHI	30 %
5000	HARSHA	HYDERBAD	15 %
NULL	NULL	NULL	NULL

LAB-7 : BOOK DATABASE

USN: 1BM19CS168

NAME: SWETHA PATIL

```
create database book_dealer;
use book_dealer;

CREATE TABLE PUBLISHER
(NAME VARCHAR(20) PRIMARY KEY,
PHONE bigint,
ADDRESS VARCHAR(20));
-- alter table publisher modify PHONE bigint;

CREATE TABLE BOOK
(BOOK_ID INTEGER PRIMARY KEY,
TITLE VARCHAR(20),
PUB_YEAR VARCHAR(20),
PUBLISHER_NAME  VARCHAR(20),
 foreign key(PUBLISHER_NAME) references PUBLISHER(NAME) ON DELETE CASCADE);


CREATE TABLE BOOK_AUTHORS
(AUTHOR_NAME VARCHAR(20),
BOOK_ID INTEGER,
foreign key(BOOK_ID) REFERENCES BOOK(BOOK_ID) ON DELETE CASCADE,
PRIMARY KEY (BOOK_ID, AUTHOR_NAME));

CREATE TABLE LIBRARY_BRANCH
(BRANCH_ID INTEGER PRIMARY KEY,
BRANCH_NAME VARCHAR(50),
ADDRESS VARCHAR(50));


CREATE TABLE BOOK_COPIES
(NO_OF_COPIES INTEGER,
BOOK_ID INTEGER,
BRANCH_ID INTEGER,
foreign key(BOOK_ID) REFERENCES BOOK(BOOK_ID) ON DELETE CASCADE,
foreign key(BRANCH_ID) REFERENCES LIBRARY_BRANCH (BRANCH_ID) ON DELETE CASCADE,
PRIMARY KEY (BOOK_ID, BRANCH_ID));


CREATE TABLE CARD
(CARD_NO INTEGER PRIMARY KEY);

CREATE TABLE BOOK_LENDING
(DATE_OUT DATE,
DUE_DATE DATE,
BOOK_ID INTEGER,
BRANCH_ID INTEGER,
CARD_NO INTEGER,
foreign key(BOOK_ID) REFERENCES BOOK(BOOK_ID) ON DELETE CASCADE,
foreign key(BRANCH_ID) REFERENCES LIBRARY_BRANCH (BRANCH_ID) ON DELETE CASCADE,
foreign key(CARD_NO) REFERENCES CARD (CARD_NO) ON DELETE CASCADE,
PRIMARY KEY (BOOK_ID, BRANCH_ID, CARD_NO));


INSERT INTO PUBLISHER VALUES ('MCGRAW-HILL', 9989076587, 'BANGALORE');
INSERT INTO PUBLISHER VALUES ('PEARSON', 9889076565, 'NEWDELHI');
INSERT INTO PUBLISHER VALUES ('RANDOM HOUSE', 7455679345, 'HYDRABAD');
INSERT INTO PUBLISHER VALUES ('HACHETTE LIVRE', 8970862340, 'CHENNAI');
INSERT INTO PUBLISHER VALUES ('GRUPO PLANETA', 7756120238, 'BANGALORE');
select * from PUBLISHER;
```

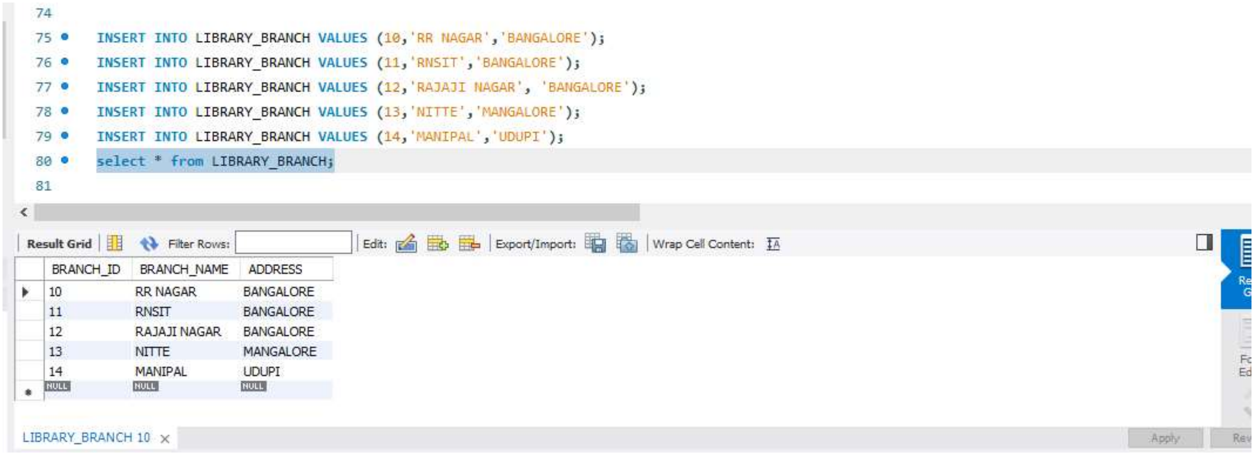


```
INSERT INTO PUBLISHER VALUES ('MCGRAW-HILL', 9989076587, 'BANGALORE');
INSERT INTO PUBLISHER VALUES ('PEARSON', 9889076565, 'NEWDELHI');
INSERT INTO PUBLISHER VALUES ('RANDOM HOUSE', 7455679345, 'HYDRABAD');
INSERT INTO PUBLISHER VALUES ('HACHETTE LIVRE', 8970862340, 'CHENNAI');
INSERT INTO PUBLISHER VALUES ('GRUPO PLANETA', 7756120238, 'BANGALORE');
select * from PUBLISHER;
```

```
NAME            PHONE       ADDRESS
GRUPO PLANETA   7756120238  BANGALORE
HACHETTE LIVRE  8970862340  CHENNAI
MCGRAW-HILL     9989076587  BANGALORE
PEARSON         9889076565  NEWDELHI
RANDOM HOUSE    7455679345  HYDRABAD
NULL            NULL        NULL
```

```
INSERT INTO BOOK VALUES (1,'DBMS','JAN-2017', 'MCGRAW-HILL');
INSERT INTO BOOK VALUES (2,'ADBMS','JUN-2016', 'MCGRAW-HILL');
INSERT INTO BOOK VALUES (3,'CN','SEP-2016', 'PEARSON');
INSERT INTO BOOK VALUES (4,'CG','SEP-2015', 'GRUPO PLANETA');
INSERT INTO BOOK VALUES (5,'OS','MAY-2016', 'PEARSON');
select * from book;



INSERT INTO BOOK_AUTHORS VALUES ('NAVATHE', 1);
INSERT INTO BOOK_AUTHORS VALUES ('NAVATHE', 2);
INSERT INTO BOOK_AUTHORS VALUES ('TANENBAUM', 3);
INSERT INTO BOOK_AUTHORS VALUES ('EDWARD ANGEL', 4);
INSERT INTO BOOK_AUTHORS VALUES ('GALVIN', 5);
select * from BOOK_AUTHORS;


INSERT INTO LIBRARY_BRANCH VALUES (10,'RR NAGAR','BANGALORE');
INSERT INTO LIBRARY_BRANCH VALUES (11,'RNSIT','BANGALORE');
INSERT INTO LIBRARY_BRANCH VALUES (12,'RAJAJI NAGAR', 'BANGALORE');
INSERT INTO LIBRARY_BRANCH VALUES (13,'NITTE','MANGALORE');
```

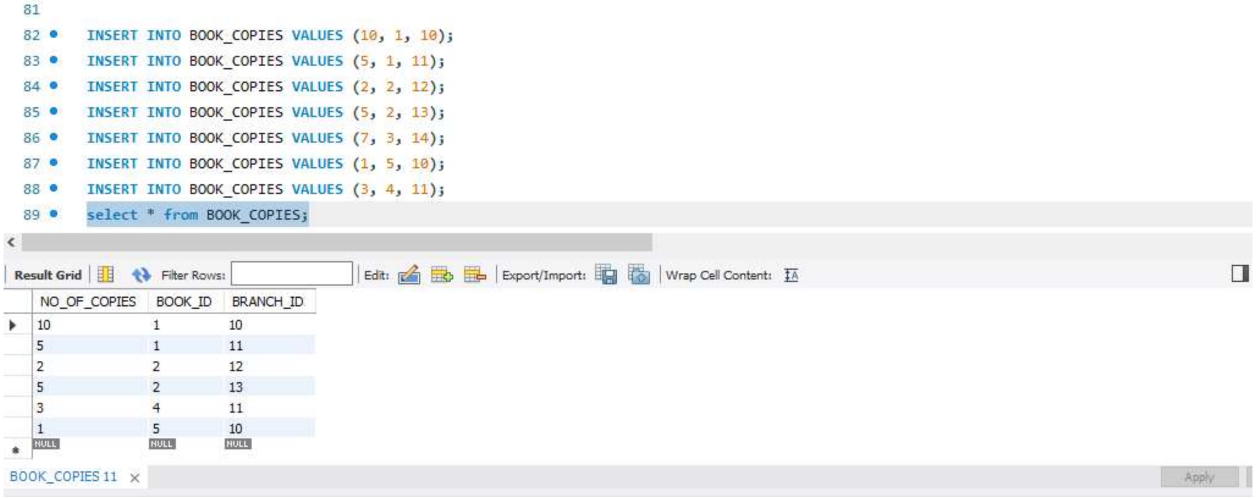
INSERT INTO LIBRARY_BRANCH VALUES (14,'MANIPAL','UDUPI');
select * from LIBRARY_BRANCH;



```
INSERT INTO LIBRARY_BRANCH VALUES (10,'RR NAGAR','BANGALORE');
INSERT INTO LIBRARY_BRANCH VALUES (11,'RNSIT','BANGALORE');
INSERT INTO LIBRARY_BRANCH VALUES (12,'RAJAJI NAGAR', 'BANGALORE');
INSERT INTO LIBRARY_BRANCH VALUES (13,'NITTE','MANGALORE');
INSERT INTO LIBRARY_BRANCH VALUES (14,'MANIPAL','UDUPI');
select * from LIBRARY_BRANCH;
```

BRANCH_ID	BRANCH_NAME	ADDRESS
10	RR NAGAR	BANGALORE
11	RNSIT	BANGALORE
12	RAJAJI NAGAR	BANGALORE
13	NITTE	MANGALORE
14	MANIPAL	UDUPI
NULL	NULL	NULL

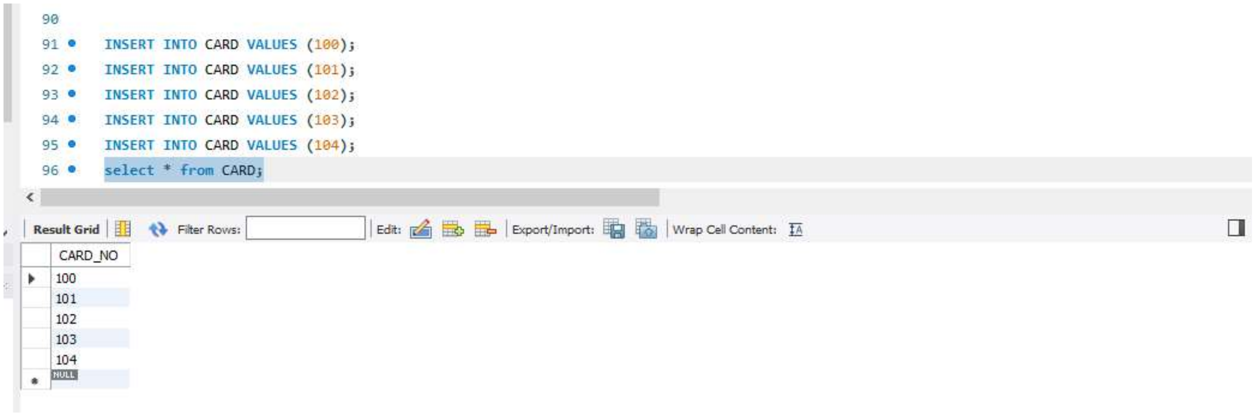
INSERT INTO BOOK_COPIES VALUES (10, 1, 10);
INSERT INTO BOOK_COPIES VALUES (5, 1, 11);
INSERT INTO BOOK_COPIES VALUES (2, 2, 12);
INSERT INTO BOOK_COPIES VALUES (5, 2, 13);
INSERT INTO BOOK_COPIES VALUES (7, 3, 14);
INSERT INTO BOOK_COPIES VALUES (1, 5, 10);
INSERT INTO BOOK_COPIES VALUES (3, 4, 11);
select * from BOOK_COPIES;



```
INSERT INTO BOOK_COPIES VALUES (10, 1, 10);
INSERT INTO BOOK_COPIES VALUES (5, 1, 11);
INSERT INTO BOOK_COPIES VALUES (2, 2, 12);
INSERT INTO BOOK_COPIES VALUES (5, 2, 13);
INSERT INTO BOOK_COPIES VALUES (7, 3, 14);
INSERT INTO BOOK_COPIES VALUES (1, 5, 10);
INSERT INTO BOOK_COPIES VALUES (3, 4, 11);
select * from BOOK_COPIES;
```

NO_OF_COPIES	BOOK_ID	BRANCH_ID
10	1	10
5	1	11
2	2	12
5	2	13
3	4	11
1	5	10
NULL	NULL	NULL

INSERT INTO CARD VALUES (100);
INSERT INTO CARD VALUES (101);
INSERT INTO CARD VALUES (102);
INSERT INTO CARD VALUES (103);
INSERT INTO CARD VALUES (104);
select * from CARD;



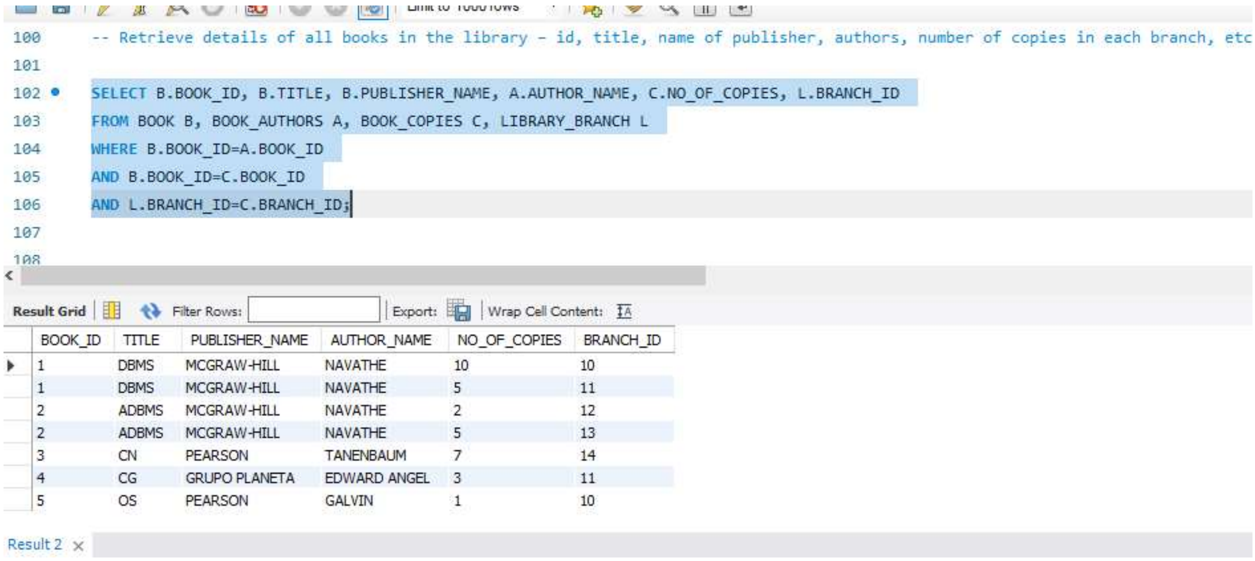
```
INSERT INTO CARD VALUES (100);
INSERT INTO CARD VALUES (101);
INSERT INTO CARD VALUES (102);
INSERT INTO CARD VALUES (103);
INSERT INTO CARD VALUES (104);
select * from CARD;
```

CARD_NO
100
101
102
103
104
NULL

INSERT INTO BOOK_LENDING VALUES ('2017-01-01','2017-06-01', 1, 10, 101);
INSERT INTO BOOK_LENDING VALUES ('17-01-11','17-03-11', 3, 14, 101);
INSERT INTO BOOK_LENDING VALUES ('17-02-21','17-04-21', 2, 13, 101);
INSERT INTO BOOK_LENDING VALUES ('17-03-15','17-07-15', 4, 11, 101);
INSERT INTO BOOK_LENDING VALUES ('17-04-12','17-05-12', 1, 11, 104);
select * from BOOK_LENDING;

-- Retrieve details of all books in the library – id, title, name of publisher, authors, number of copies in each branch, etc.

SELECT B.BOOK_ID, B.TITLE, B.PUBLISHER_NAME, A.AUTHOR_NAME, C.NO_OF_COPIES, L.BRANCH_ID
FROM BOOK B, BOOK_AUTHORS A, BOOK_COPIES C, LIBRARY_BRANCH L
WHERE B.BOOK_ID=A.BOOK_ID
AND B.BOOK_ID=C.BOOK_ID
AND L.BRANCH_ID=C.BRANCH_ID;

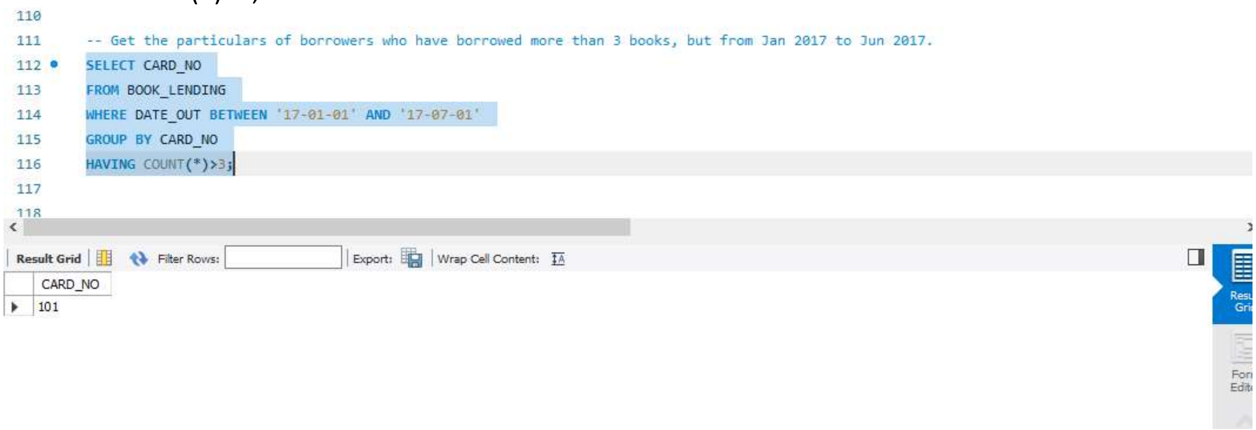


```
-- Retrieve details of all books in the library - id, title, name of publisher, authors, number of copies in each branch, etc

SELECT B.BOOK_ID, B.TITLE, B.PUBLISHER_NAME, A.AUTHOR_NAME, C.NO_OF_COPIES, L.BRANCH_ID
FROM BOOK B, BOOK_AUTHORS A, BOOK_COPIES C, LIBRARY_BRANCH L
WHERE B.BOOK_ID=A.BOOK_ID
AND B.BOOK_ID=C.BOOK_ID
AND L.BRANCH_ID=C.BRANCH_ID;
```

BOOK_ID	TITLE	PUBLISHER_NAME	AUTHOR_NAME	NO_OF_COPIES	BRANCH_ID
1	DBMS	MCGRAW-HILL	NAVATHE	10	10
1	DBMS	MCGRAW-HILL	NAVATHE	5	11
2	ADBMS	MCGRAW-HILL	NAVATHE	2	12
2	ADBMS	MCGRAW-HILL	NAVATHE	5	13
3	CN	PEARSON	TANENBAUM	7	14
4	CG	GRUPO PLANETA	EDWARD ANGEL	3	11
5	OS	PEARSON	GALVIN	1	10

-- Get the particulars of borrowers who have borrowed more than 3 books, but from Jan 2017 to Jun 2017.

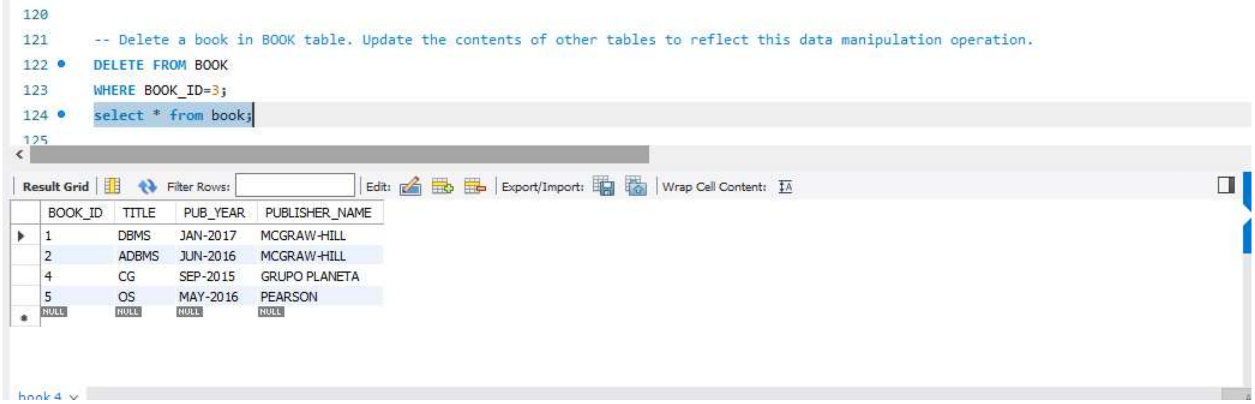
SELECT CARD_NO
FROM BOOK_LENDING
WHERE DATE_OUT BETWEEN '17-01-01' AND '17-07-01'
GROUP BY CARD_NO
HAVING COUNT(*)>3;



```
-- Get the particulars of borrowers who have borrowed more than 3 books, but from Jan 2017 to Jun 2017.
SELECT CARD_NO
FROM BOOK_LENDING
WHERE DATE_OUT BETWEEN '17-01-01' AND '17-07-01'
GROUP BY CARD_NO
HAVING COUNT(*)>3;
```

CARD_NO
101

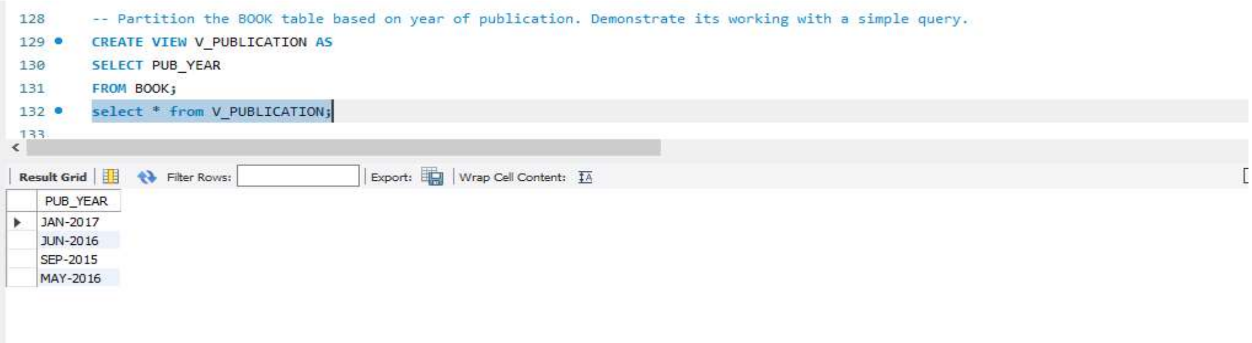
-- Delete a book in BOOK table. Update the contents of other tables to reflect this data manipulation operation.
DELETE FROM BOOK
WHERE BOOK_ID=3;
select * from book;



```
-- Delete a book in BOOK table. Update the contents of other tables to reflect this data manipulation operation.
DELETE FROM BOOK
WHERE BOOK_ID=3;
select * from book;
```

BOOK_ID	TITLE	PUB_YEAR	PUBLISHER_NAME
1	DBMS	JAN-2017	MCGRAW-HILL
2	ADBMS	JUN-2016	MCGRAW-HILL
4	CG	SEP-2015	GRUPO PLANETA
5	OS	MAY-2016	PEARSON
NULL	NULL	NULL	NULL

-- Partition the BOOK table based on year of publication. Demonstrate its working with a simple query.
CREATE VIEW V_PUBLICATION AS
SELECT PUB_YEAR
FROM BOOK;
select * from V_PUBLICATION;

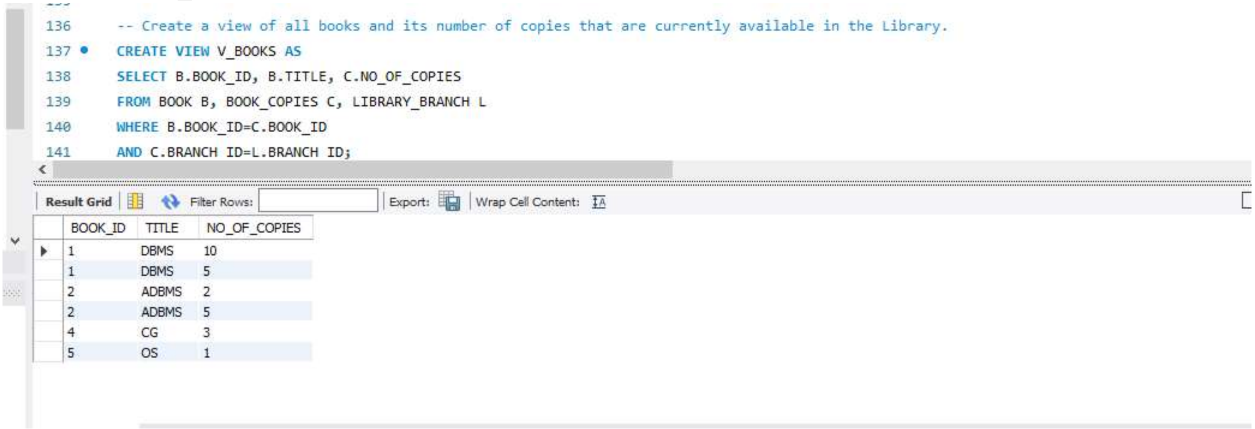


```
-- Partition the BOOK table based on year of publication. Demonstrate its working with a simple query.
CREATE VIEW V_PUBLICATION AS
SELECT PUB_YEAR
FROM BOOK;
select * from V_PUBLICATION;
```

```
PUB_YEAR
JAN-2017
JUN-2016
SEP-2015
MAY-2016
```

-- Create a view of all books and its number of copies that are currently available in the Library.

```
CREATE VIEW V_BOOKS AS
SELECT B.BOOK_ID, B.TITLE, C.NO_OF_COPIES
FROM BOOK B, BOOK_COPIES C, LIBRARY_BRANCH L
WHERE B.BOOK_ID=C.BOOK_ID
AND C.BRANCH_ID=L.BRANCH_ID;
select * from V_BOOKS;
```



```
-- Create a view of all books and its number of copies that are currently available in the Library.
CREATE VIEW V_BOOKS AS
SELECT B.BOOK_ID, B.TITLE, C.NO_OF_COPIES
FROM BOOK B, BOOK_COPIES C, LIBRARY_BRANCH L
WHERE B.BOOK_ID=C.BOOK_ID
AND C.BRANCH ID=L.BRANCH ID;
```

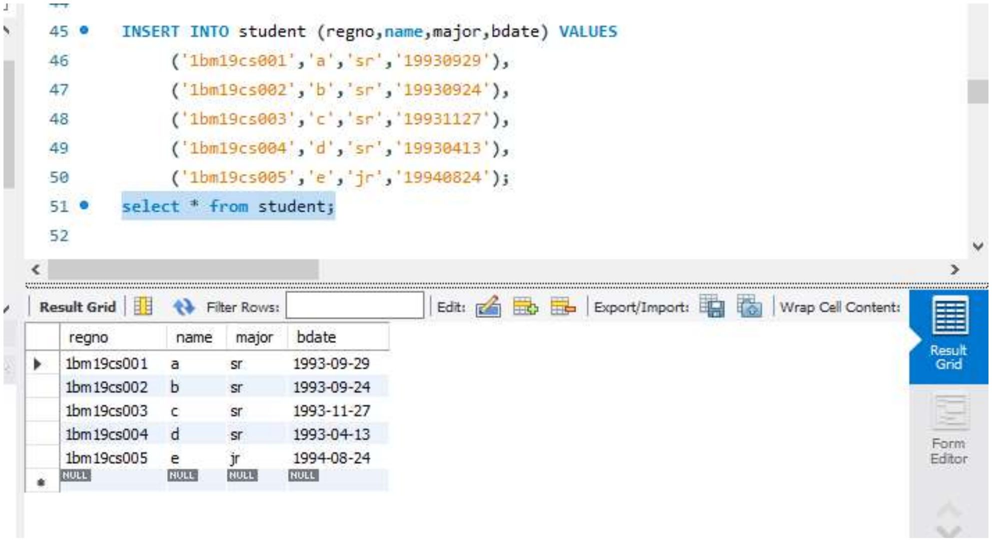
```
BOOK_ID  TITLE  NO_OF_COPIES
1        DBMS   10
1        DBMS   5
2        ADBMS  2
2        ADBMS  5
4        CG     3
5        OS     1
```

USN: 1BM19CS168

NAME: SWETHA PATIL

LAB-8: Student Enrollment Database

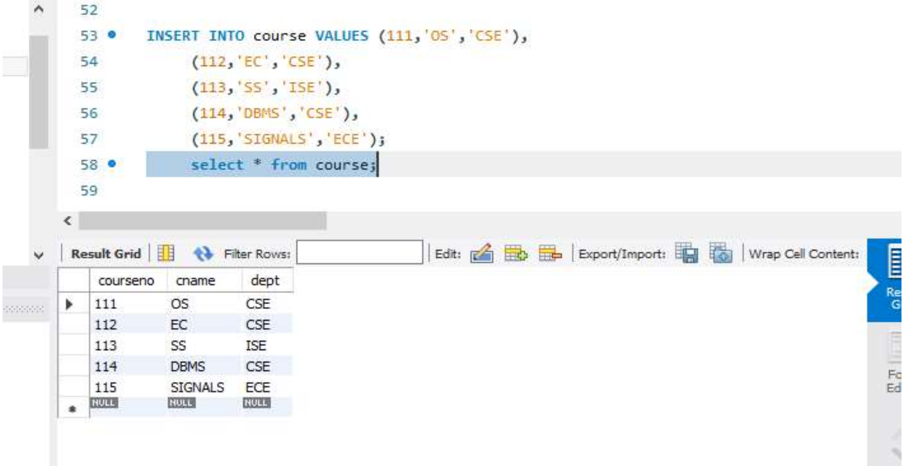
```
create database student_enrollment;
use student_enrollment;

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,
book_isbn INT,
    PRIMARY KEY (courseno,book_isbn),
    FOREIGN KEY (courseno) REFERENCES course (courseno),
    FOREIGN KEY (book_isbn) REFERENCES text(book_isbn) );

show tables;

INSERT INTO student (regno,name,major,bdate) VALUES
            ('1bm19cs001','a','sr','19930929'),
    ('1bm19cs002','b','sr','19930924'),
    ('1bm19cs003','c','sr','19931127'),
    ('1bm19cs004','d','sr','19930413'),
    ('1bm19cs005','e','jr','19940824');
select * from student;
```



```
INSERT INTO student (regno,name,major,bdate) VALUES
      ('1bm19cs001','a','sr','19930929'),
      ('1bm19cs002','b','sr','19930924'),
      ('1bm19cs003','c','sr','19931127'),
      ('1bm19cs004','d','sr','19930413'),
      ('1bm19cs005','e','jr','19940824');
select * from student;
```

regno	name	major	bdate
1bm19cs001	a	sr	1993-09-29
1bm19cs002	b	sr	1993-09-24
1bm19cs003	c	sr	1993-11-27
1bm19cs004	d	sr	1993-04-13
1bm19cs005	e	jr	1994-08-24
NULL	NULL	NULL	NULL

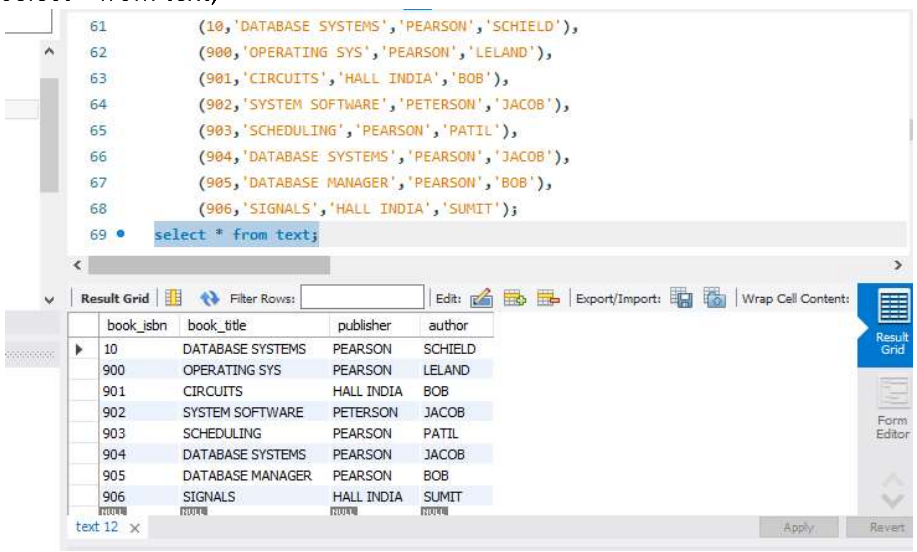
```
INSERT INTO course VALUES (111,'OS','CSE'),
    (112,'EC','CSE'),
    (113,'SS','ISE'),
    (114,'DBMS','CSE'),
    (115,'SIGNALS','ECE');
    select * from course;
```



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

courseno	cname	dept
111	OS	CSE
112	EC	CSE
113	SS	ISE
114	DBMS	CSE
115	SIGNALS	ECE
NULL	NULL	NULL

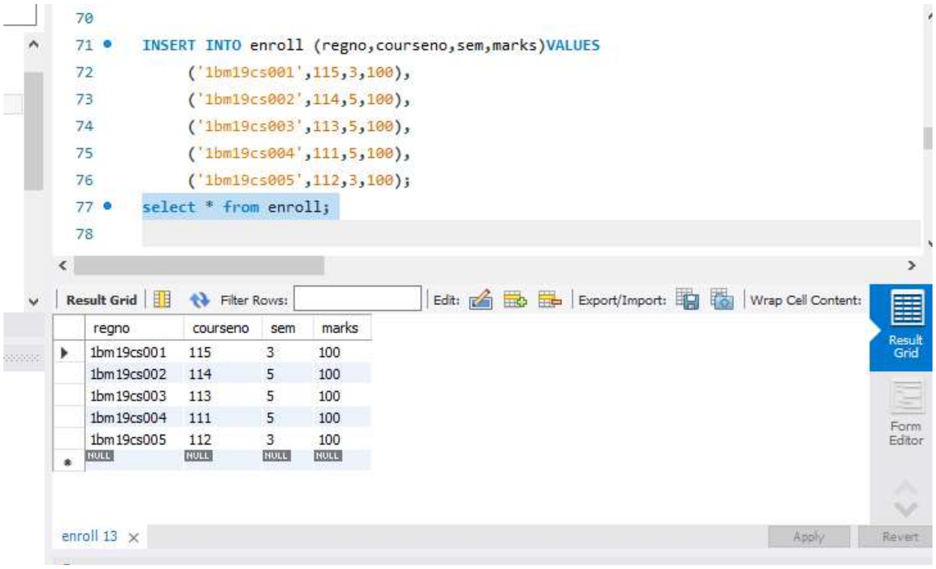
```
INSERT INTO text (book_isbn,book_title,publisher,author)VALUES
    (10,'DATABASE SYSTEMS','PEARSON','SCHIELD'),
    (900,'OPERATING SYS','PEARSON','LELAND'),
    (901,'CIRCUITS','HALL INDIA','BOB'),
    (902,'SYSTEM SOFTWARE','PETERSON','JACOB'),
    (903,'SCHEDULING','PEARSON','PATIL'),
    (904,'DATABASE SYSTEMS','PEARSON','JACOB'),
    (905,'DATABASE MANAGER','PEARSON','BOB'),
    (906,'SIGNALS','HALL INDIA','SUMIT');
select * from text;
```



```
        (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');
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
NULL	NULL	NULL	NULL

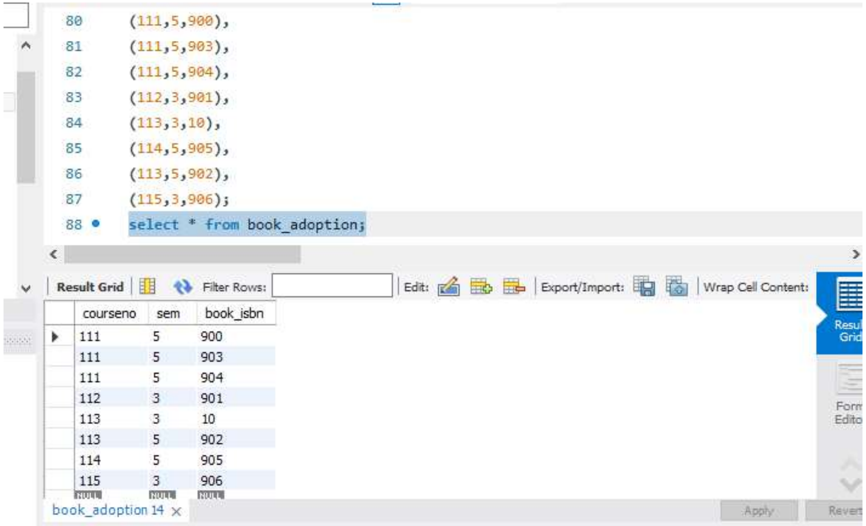
```
INSERT INTO enroll (regno,courseno,sem,marks)VALUES
            ('1bm19cs001',115,3,100),
    ('1bm19cs002',114,5,100),
    ('1bm19cs003',113,5,100),
    ('1bm19cs004',111,5,100),
    ('1bm19cs005',112,3,100);
select * from enroll;
```



```
INSERT INTO enroll (regno,courseno,sem,marks)VALUES
     ('1bm19cs001',115,3,100),
     ('1bm19cs002',114,5,100),
     ('1bm19cs003',113,5,100),
     ('1bm19cs004',111,5,100),
     ('1bm19cs005',112,3,100);
select * from enroll;
```

regno	courseno	sem	marks
1bm19cs001	115	3	100
1bm19cs002	114	5	100
1bm19cs003	113	5	100
1bm19cs004	111	5	100
1bm19cs005	112	3	100
NULL	NULL	NULL	NULL

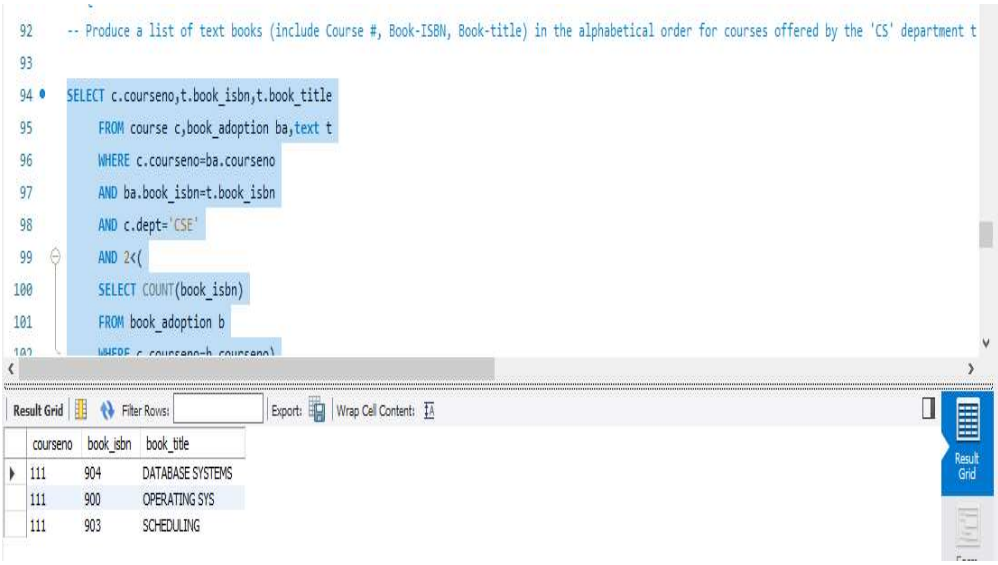
```
INSERT INTO book_adoption (courseno,sem,book_isbn) VALUES
(111,5,900),
(111,5,903),
(111,5,904),
(112,3,901),
(113,3,10),
(114,5,905),
(113,5,902),
(115,3,906);
select * from book_adoption;
```



```
(111,5,900),
(111,5,903),
(111,5,904),
(112,3,901),
(113,3,10),
(114,5,905),
(113,5,902),
(115,3,906);
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
NULL	NULL	NULL

```
-- Queries:

-- query 1:
insert into text values (907,'ai','hall india','sumit');
insert into book_adoption values(115, 2, 907);
select * from text;
select * from book_adoption;


-- Produce a list of text books (include Course #, Book-ISBN, Book-title) in the alphabetical order for courses offered by the 'CS' department that use more than two books.

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;
```

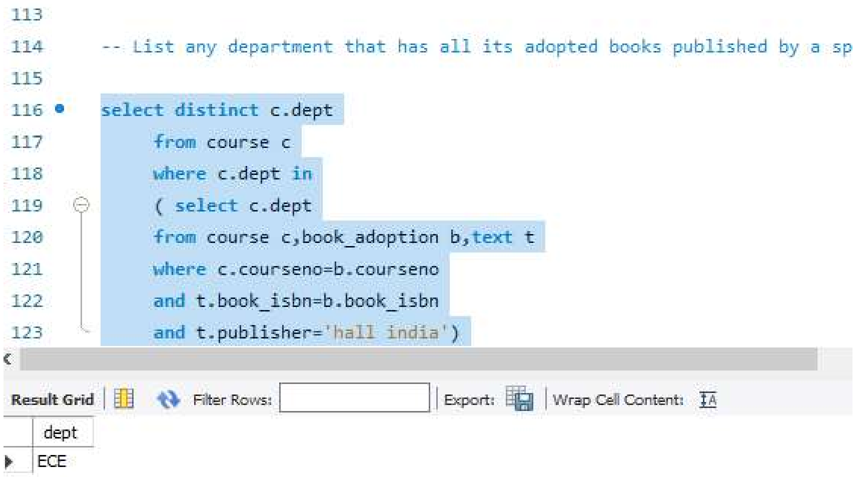


```
-- Produce a list of text books (include Course #, Book-ISBN, Book-title) in the alphabetical order for courses offered by the 'CS' department t

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)
```

courseno	book_isbn	book_title
111	904	DATABASE SYSTEMS
111	900	OPERATING SYS
111	903	SCHEDULING

-- List any department that has all its adopted books published by a specific publisher.

```
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='hall india')
    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 != 'hall india');
```



```
-- List any department that has all its adopted books published by a sp

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='hall india')
```

dept
ECE

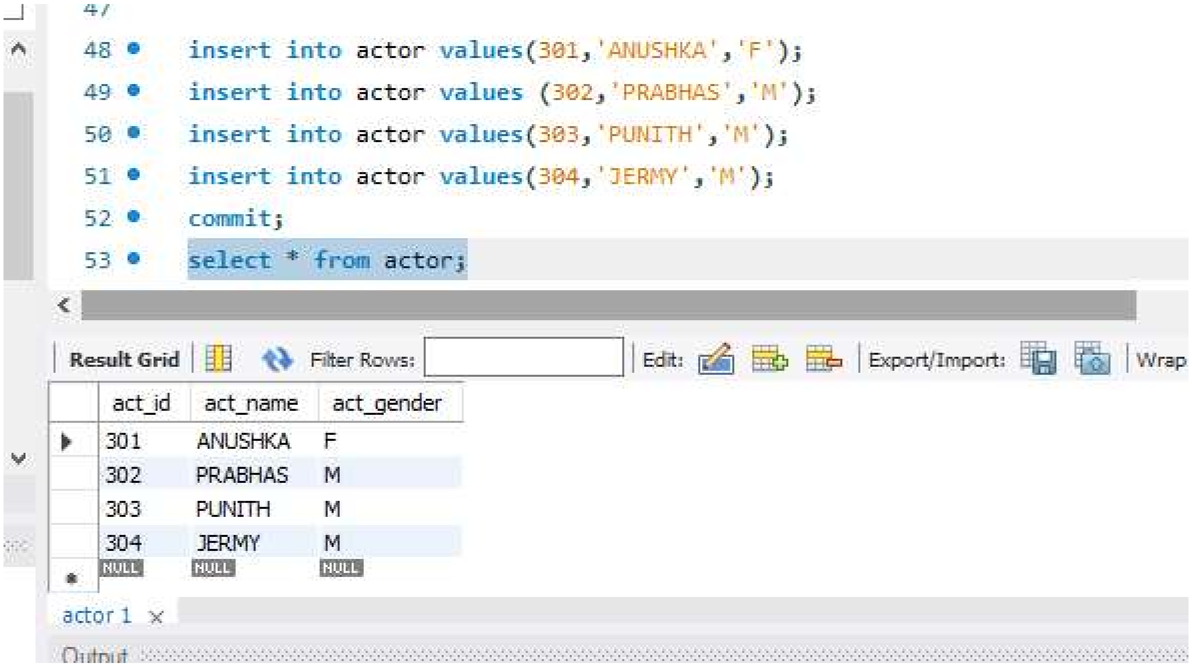
USN: 1BM19CS168

LAB-9: MOVIE DATABASE

NAME: SWETHA PATIL

```
CREATE DATABASE MOVIE;
USE MOVIE;

create table actor(
act_id int,
act_name varchar(20),
act_gender char(1),
primary key(act_id));
desc actor;

create table director(
dir_id int,
dir_name varchar(20),
dir_phone int(10),
primary key(dir_id));
desc director;

alter table director
modify column dir_phone bigint;
desc director;

create table movies(
mov_id int,
mov_title varchar(25),
mov_year int,
mov_lang varchar(12),
dir_id int,
primary key(mov_id),
foreign key(dir_id) references director(dir_id));
desc movies;

create table movie_cast(
act_id int,
mov_id int,
role varchar(10),
primary key(act_id,mov_id),
foreign key(act_id) references actor(act_id),
foreign key(mov_id) references movies(mov_id));
desc movie_cast;

create table rating(
mov_id int,
rev_stars varchar(25),
primary key(mov_id),
foreign key(mov_id) references movies(mov_id));
desc rating;

insert into actor values(301,'ANUSHKA','F');
```

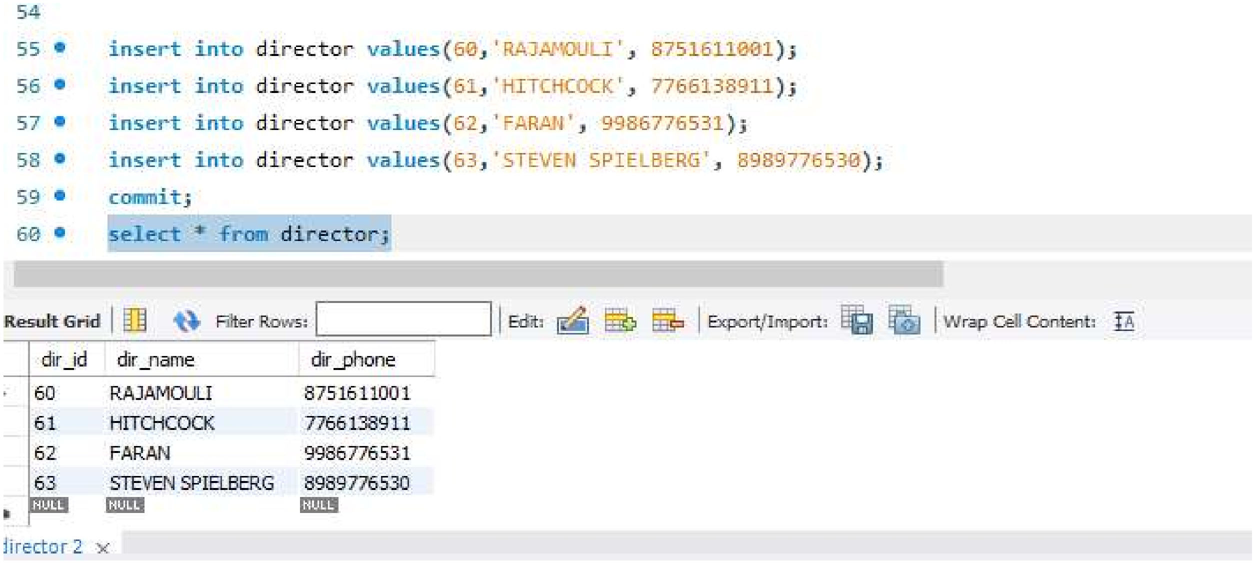
insert into actor values (302,'PRABHAS','M');
insert into actor values(303,'PUNITH','M');
insert into actor values(304,'JERMY','M');
commit;
select * from actor;



```
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,'JERMY','M');
commit;
select * from actor;
```

act_id	act_name	act_gender
301	ANUSHKA	F
302	PRABHAS	M
303	PUNITH	M
304	JERMY	M
NULL	NULL	NULL

insert into director values(60,'RAJAMOULI', 8751611001);
insert into director values(61,'HITCHCOCK', 7766138911);
insert into director values(62,'FARAN', 9986776531);
insert into director values(63,'STEVEN SPIELBERG', 8989776530);
commit;
select * from director;

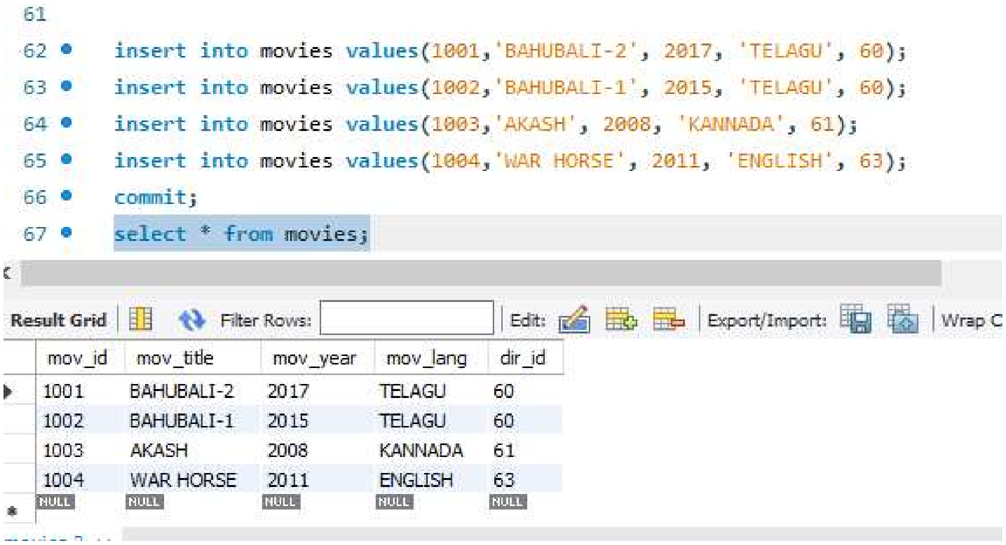


```
insert into director values(60,'RAJAMOULI', 8751611001);
insert into director values(61,'HITCHCOCK', 7766138911);
insert into director values(62,'FARAN', 9986776531);
insert into director values(63,'STEVEN SPIELBERG', 8989776530);
commit;
select * from director;
```

dir_id	dir_name	dir_phone
60	RAJAMOULI	8751611001
61	HITCHCOCK	7766138911
62	FARAN	9986776531
63	STEVEN SPIELBERG	8989776530
NULL	NULL	NULL

insert into movies values(1001,'BAHUBALI-2', 2017, 'TELAGU', 60);

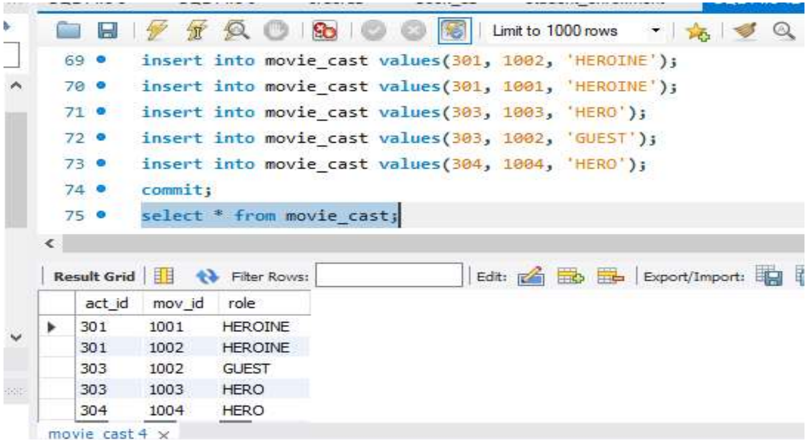
insert into movies values(1002,'BAHUBALI-1', 2015, 'TELAGU', 60);
insert into movies values(1003,'AKASH', 2008, 'KANNADA', 61);
insert into movies values(1004,'WAR HORSE', 2011, 'ENGLISH', 63);
commit;
select * from movies;



```
insert into movies values(1001,'BAHUBALI-2', 2017, 'TELAGU', 60);
insert into movies values(1002,'BAHUBALI-1', 2015, 'TELAGU', 60);
insert into movies values(1003,'AKASH', 2008, 'KANNADA', 61);
insert into movies values(1004,'WAR HORSE', 2011, 'ENGLISH', 63);
commit;
select * from movies;
```

mov_id	mov_title	mov_year	mov_lang	dir_id
1001	BAHUBALI-2	2017	TELAGU	60
1002	BAHUBALI-1	2015	TELAGU	60
1003	AKASH	2008	KANNADA	61
1004	WAR HORSE	2011	ENGLISH	63
NULL	NULL	NULL	NULL	NULL

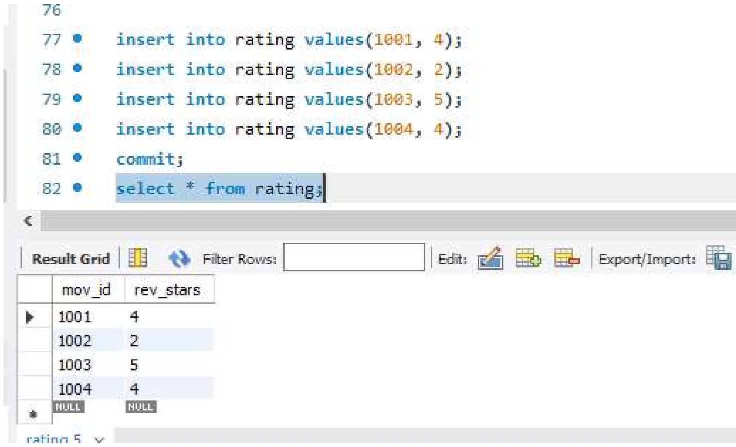
insert into movie_cast values(301, 1002, 'HEROINE');
insert into movie_cast values(301, 1001, 'HEROINE');
insert into movie_cast values(303, 1003, 'HERO');
insert into movie_cast values(303, 1002, 'GUEST');
insert into movie_cast values(304, 1004, 'HERO');
commit;
select * from movie_cast;



```
insert into movie_cast values(301, 1002, 'HEROINE');
insert into movie_cast values(301, 1001, 'HEROINE');
insert into movie_cast values(303, 1003, 'HERO');
insert into movie_cast values(303, 1002, 'GUEST');
insert into movie_cast values(304, 1004, 'HERO');
commit;
select * from movie_cast;
```

act_id	mov_id	role
301	1001	HEROINE
301	1002	HEROINE
303	1002	GUEST
303	1003	HERO
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);
commit;
select * from rating;

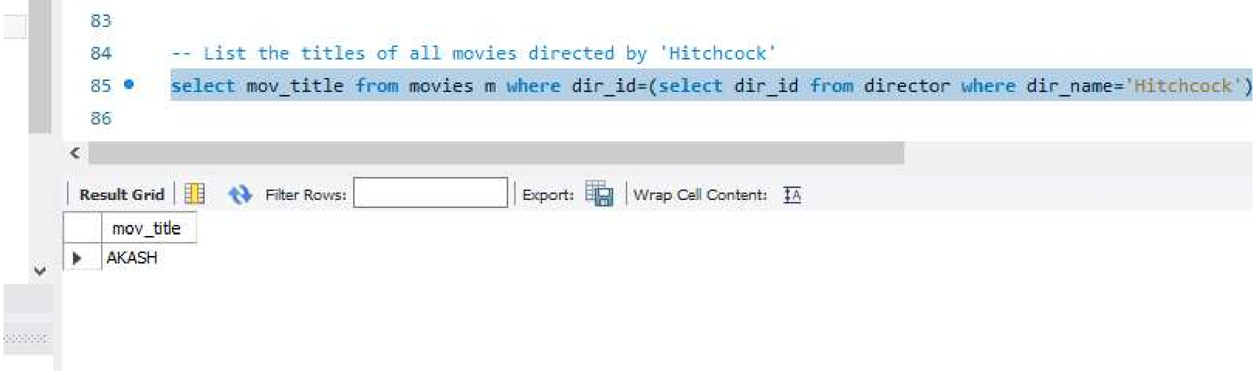


```
insert into rating values(1001, 4);
insert into rating values(1002, 2);
insert into rating values(1003, 5);
insert into rating values(1004, 4);
commit;
select * from rating;
```

mov_id	rev_stars
1001	4
1002	2
1003	5
1004	4
NULL	NULL

-- List the titles of all movies directed by 'Hitchcock'
select mov_title from movies m where dir_id=(select dir_id from director where dir_name='Hitchcock');

select mov_title from movies m,director d where m.dir_id=d.dir_id and d.dir_name='Hitchcock';

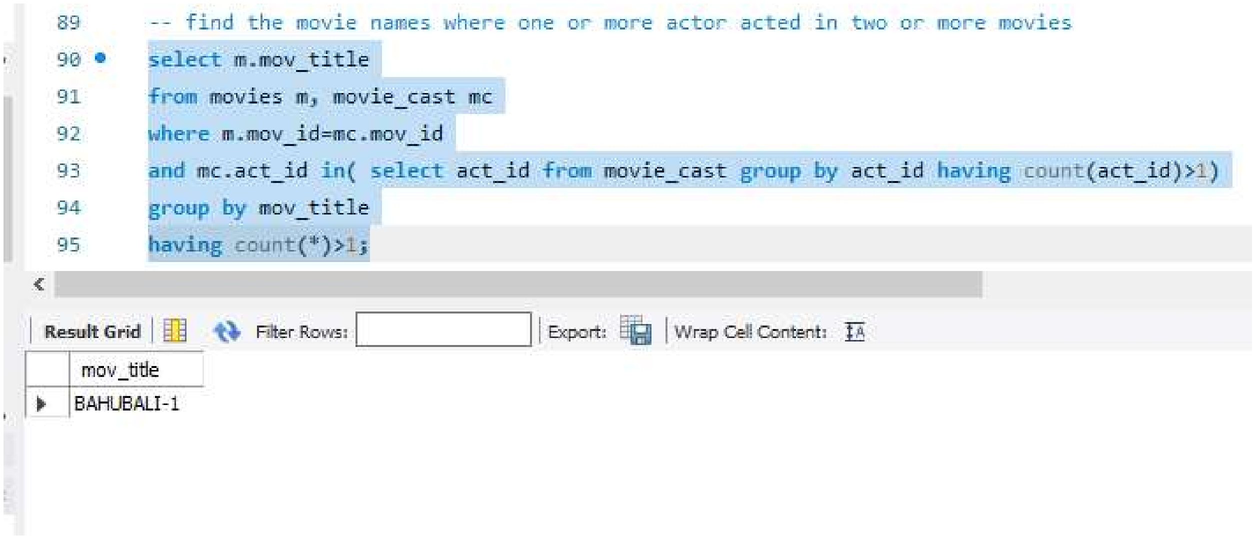


```
-- List the titles of all movies directed by 'Hitchcock'
select mov_title from movies m where dir_id=(select dir_id from director where dir_name='Hitchcock')
```

mov_title
AKASH

-- find the movie names where one or more actor acted in two or more movies
select m.mov_title
from movies m, movie_cast mc
where m.mov_id=mc.mov_id
and mc.act_id in(select act_id from movie_cast group by act_id having count(act_id)>1)
group by mov_title
having count(*)>1;

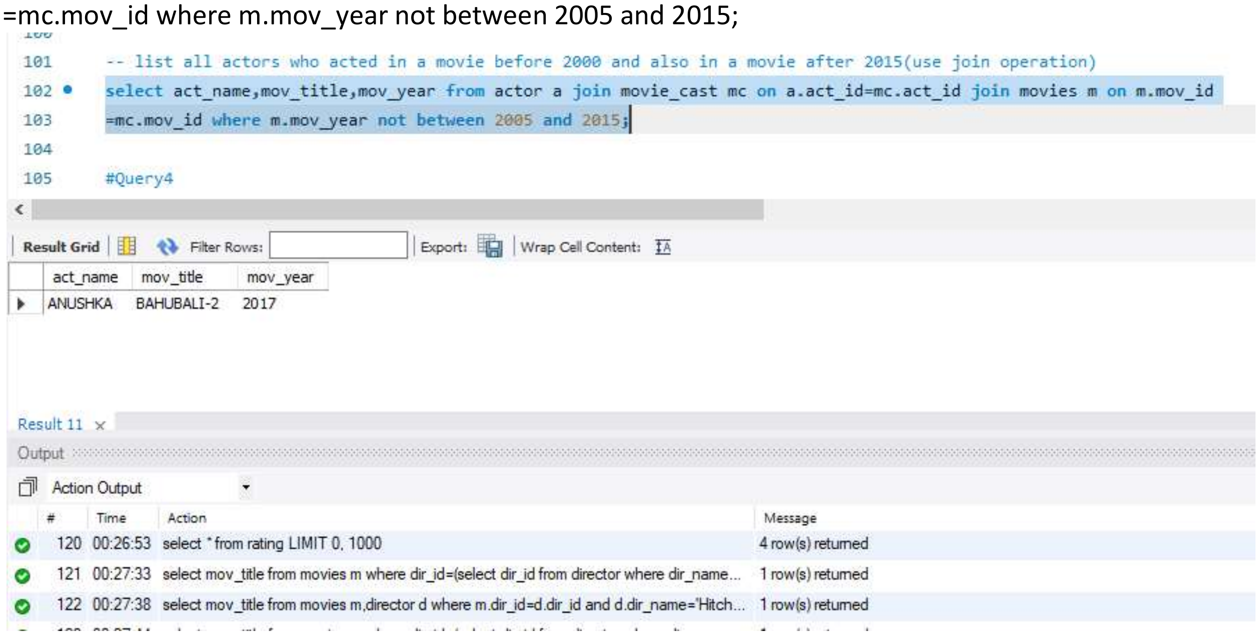
select m.mov_title from movies m,movie_cast mc where m.mov_id=mc.mov_id
and mc.act_id in(select act_id from movie_cast group by act_id having count(act_id)>1)
group by mov_title having count(*)>1;



```
-- find the movie names where one or more actor acted in two or more movies
select m.mov_title
from movies m, movie_cast mc
where m.mov_id=mc.mov_id
and mc.act_id in( select act_id from movie_cast group by act_id having count(act_id)>1)
group by mov_title
having count(*)>1;
```

```
mov_title
BAHUBALI-1
```

-- list all actors who acted in a movie before 2000 and also in a movie after 2015(use join operation)
select act_name,mov_title,mov_year from actor a join movie_cast mc on a.act_id=mc.act_id join movies m on m.mov_id
=mc.mov_id where m.mov_year not between 2005 and 2015;



```
-- list all actors who acted in a movie before 2000 and also in a movie after 2015(use join operation)
select act_name,mov_title,mov_year from actor a join movie_cast mc on a.act_id=mc.act_id join movies m on m.mov_id
=mc.mov_id where m.mov_year not between 2005 and 2015;


#Query4
```

```
act_name   mov_title    mov_year
ANUSHKA    BAHUBALI-2   2017
```

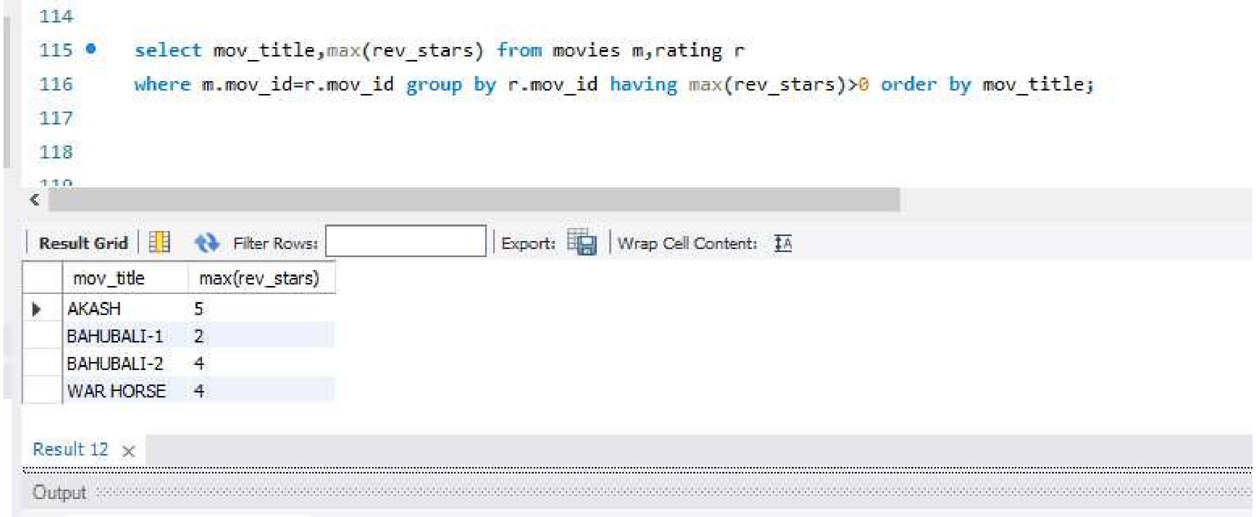
```
  #    Time      Action                                                                           Message
  120  00:26:53  select * from rating LIMIT 0, 1000                                               4 row(s) returned
  121  00:27:33  select mov_title from movies m where dir_id=(select dir_id from director where dir_name...   1 row(s) returned
  122  00:27:38  select mov_title from movies m,director d where m.dir_id=d.dir_id and d.dir_name='Hitch...  1 row(s) returned
```

-- find the titles of movies and number of stars for each movie that has at least one rating and find the highest number of
-- stars that movie recieved. sort the result by movie title

select mov_title,max(rev_stars)
from movies
inner join rating using(mov_id)
group by mov_id

having max(rev_stars)>0
order by mov_title;

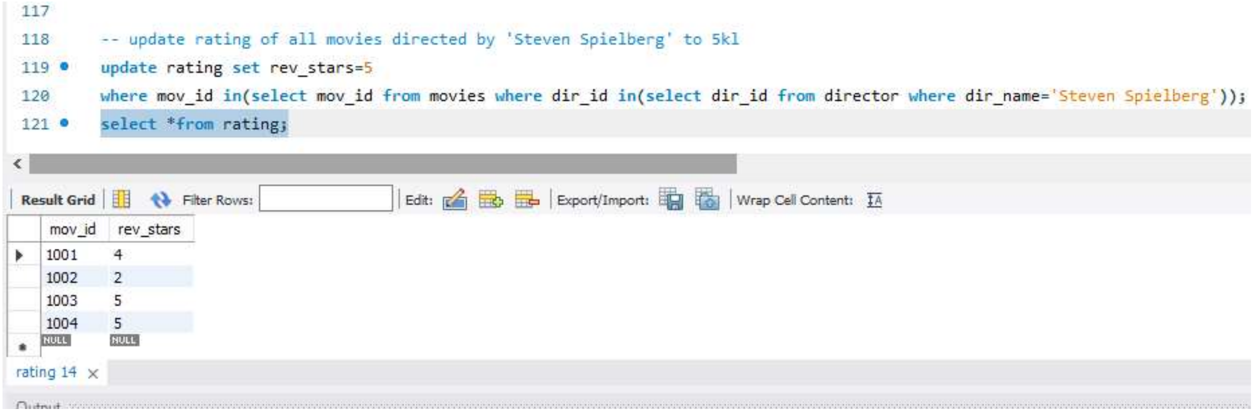
select mov_title,max(rev_stars) from movies m,rating r
where m.mov_id=r.mov_id group by r.mov_id having max(rev_stars)>0 order by mov_title;



```
select mov_title,max(rev_stars) from movies m,rating r
where m.mov_id=r.mov_id group by r.mov_id having max(rev_stars)>0 order by mov_title;
```

mov_title	max(rev_stars)
AKASH	5
BAHUBALI-1	2
BAHUBALI-2	4
WAR HORSE	4

-- update rating of all movies directed by 'Steven Spielberg' to 5kl
update rating set rev_stars=5
where mov_id in(select mov_id from movies where dir_id in(select dir_id from director where dir_name='Steven Spielberg'));
select *from rating;



```
-- update rating of all movies directed by 'Steven Spielberg' to 5kl
update rating set rev_stars=5
where mov_id in(select mov_id from movies where dir_id in(select dir_id from director where dir_name='Steven Spielberg'));
select *from rating;
```

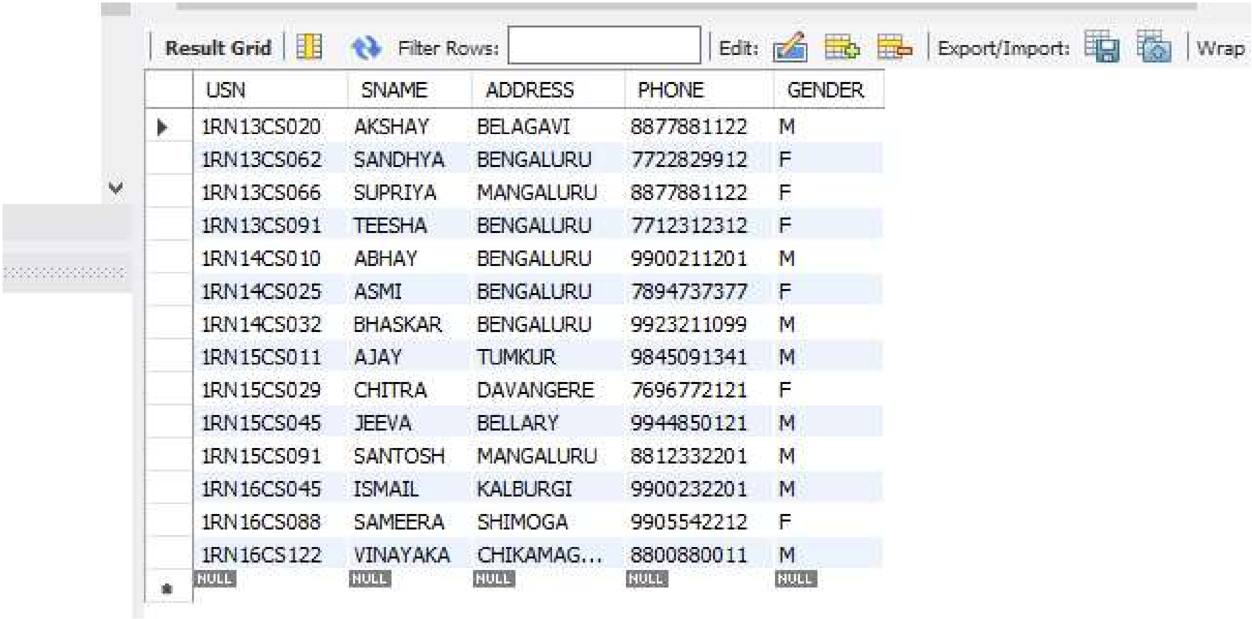
mov_id	rev_stars
1001	4
1002	2
1003	5
1004	5
NULL	NULL

LAB-10: COLLEGE DATABASE

USN: 1BM19CS168

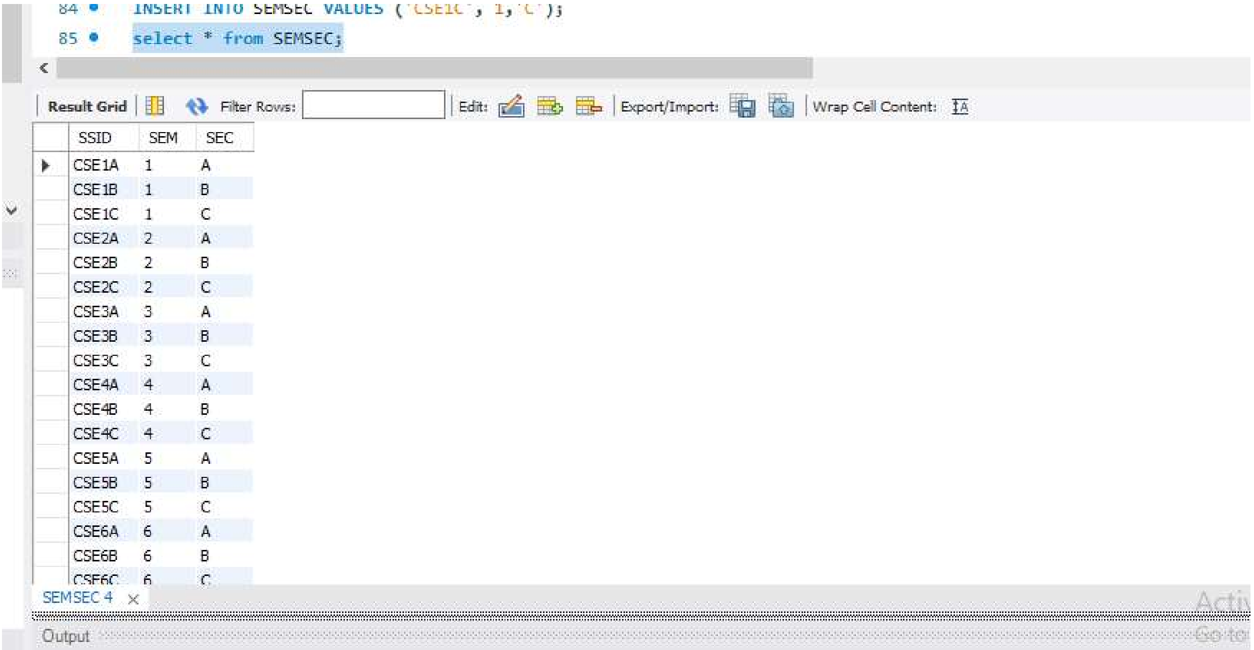
NAME: SWETHA PATIL

```
CREATE database COLLEGE;
USE COLLEGE;

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

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

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 INT,
CREDITS INT,
PRIMARY KEY (SUBCODE));

CREATE TABLE IAMARKS (
USN VARCHAR (10),
SUBCODE VARCHAR (8),
SSID VARCHAR (5),
TEST1 INT,
TEST2 INT,
TEST3 INT,
FINALIA INT,
PRIMARY KEY (USN, SUBCODE, SSID),
FOREIGN KEY (USN) REFERENCES STUDENT (USN),
FOREIGN KEY (SUBCODE) REFERENCES SUBJECT (SUBCODE),
FOREIGN KEY (SSID) REFERENCES SEMSEC (SSID));

INSERT INTO STUDENT VALUES ('1RN13CS020','AKSHAY','BELAGAVI', 8877881122,'M');
INSERT INTO STUDENT VALUES ('1RN13CS062','SANDHYA','BENGALURU', 7722829912,'F');
INSERT INTO STUDENT VALUES ('1RN13CS091','TEESHA','BENGALURU', 7712312312,'F');
INSERT INTO STUDENT VALUES ('1RN13CS066','SUPRIYA','MANGALURU', 8877881122,'F');
INSERT INTO STUDENT VALUES ('1RN14CS010','ABHAY','BENGALURU', 9900211201,'M');
INSERT INTO STUDENT VALUES ('1RN14CS032','BHASKAR','BENGALURU', 9923211099,'M');
INSERT INTO STUDENT VALUES ('1RN14CS025','ASMI','BENGALURU', 7894737377,'F');
INSERT INTO STUDENT VALUES ('1RN15CS011','AJAY','TUMKUR', 9845091341,'M');
INSERT INTO STUDENT VALUES ('1RN15CS029','CHITRA','DAVANGERE', 7696772121,'F');
INSERT INTO STUDENT VALUES ('1RN15CS045','JEEVA','BELLARY', 9944850121,'M');
INSERT INTO STUDENT VALUES ('1RN15CS091','SANTOSH','MANGALURU', 8812332201,'M');
INSERT INTO STUDENT VALUES ('1RN16CS045','ISMAIL','KALBURGI', 9900232201,'M');
INSERT INTO STUDENT VALUES ('1RN16CS088','SAMEERA','SHIMOGA', 9905542212,'F');
INSERT INTO STUDENT VALUES ('1RN16CS122','VINAYAKA','CHIKAMAGALUR', 8800880011,'M');
select * from STUDENT;
```



USN	SNAME	ADDRESS	PHONE	GENDER
1RN13CS020	AKSHAY	BELAGAVI	8877881122	M
1RN13CS062	SANDHYA	BENGALURU	7722829912	F
1RN13CS066	SUPRIYA	MANGALURU	8877881122	F
1RN13CS091	TEESHA	BENGALURU	7712312312	F
1RN14CS010	ABHAY	BENGALURU	9900211201	M
1RN14CS025	ASMI	BENGALURU	7894737377	F
1RN14CS032	BHASKAR	BENGALURU	9923211099	M
1RN15CS011	AJAY	TUMKUR	9845091341	M
1RN15CS029	CHITRA	DAVANGERE	7696772121	F
1RN15CS045	JEEVA	BELLARY	9944850121	M
1RN15CS091	SANTOSH	MANGALURU	8812332201	M
1RN16CS045	ISMAIL	KALBURGI	9900232201	M
1RN16CS088	SAMEERA	SHIMOGA	9905542212	F
1RN16CS122	VINAYAKA	CHIKAMAG...	8800880011	M
NULL	NULL	NULL	NULL	NULL

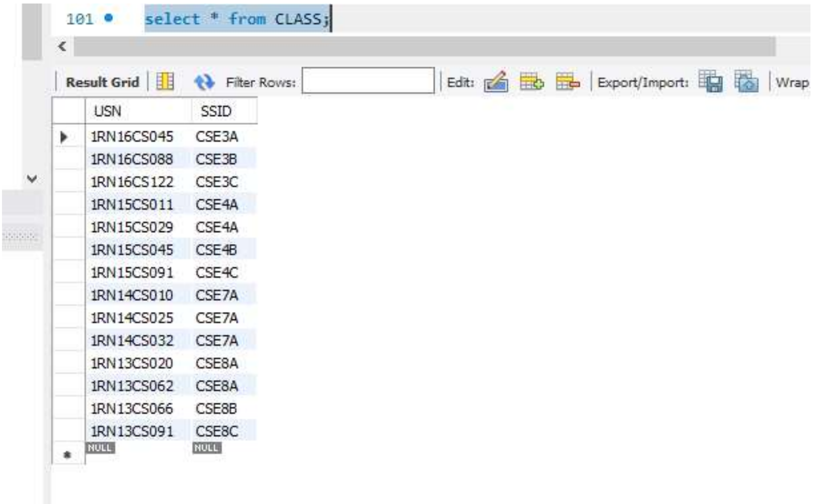
```
INSERT INTO SEMSEC VALUES ('CSE8A', 8,'A');
INSERT INTO SEMSEC VALUES ('CSE8B', 8,'B');
INSERT INTO SEMSEC VALUES ('CSE8C', 8,'C');
INSERT INTO SEMSEC VALUES ('CSE7A', 7,'A');
INSERT INTO SEMSEC VALUES ('CSE7B', 7,'B');
INSERT INTO SEMSEC VALUES ('CSE7C', 7,'C');
INSERT INTO SEMSEC VALUES ('CSE6A', 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');
select * from SEMSEC;
```



```
INSERT INTO SEMSEC VALUES ('CSE1C', 1,'C');
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

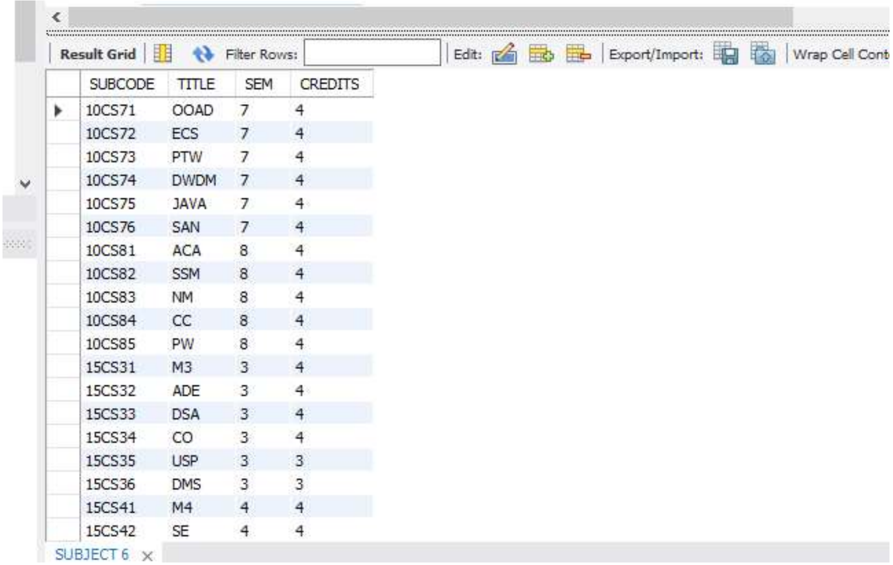
```
INSERT INTO CLASS VALUES ('1RN13CS020','CSE8A');
INSERT INTO CLASS VALUES ('1RN13CS062','CSE8A');
INSERT INTO CLASS VALUES ('1RN13CS066','CSE8B');
INSERT INTO CLASS VALUES ('1RN13CS091','CSE8C');
INSERT INTO CLASS VALUES ('1RN14CS010','CSE7A');
INSERT INTO CLASS VALUES ('1RN14CS025','CSE7A');
INSERT 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');
select * from CLASS;
```



```
select * from CLASS;
```

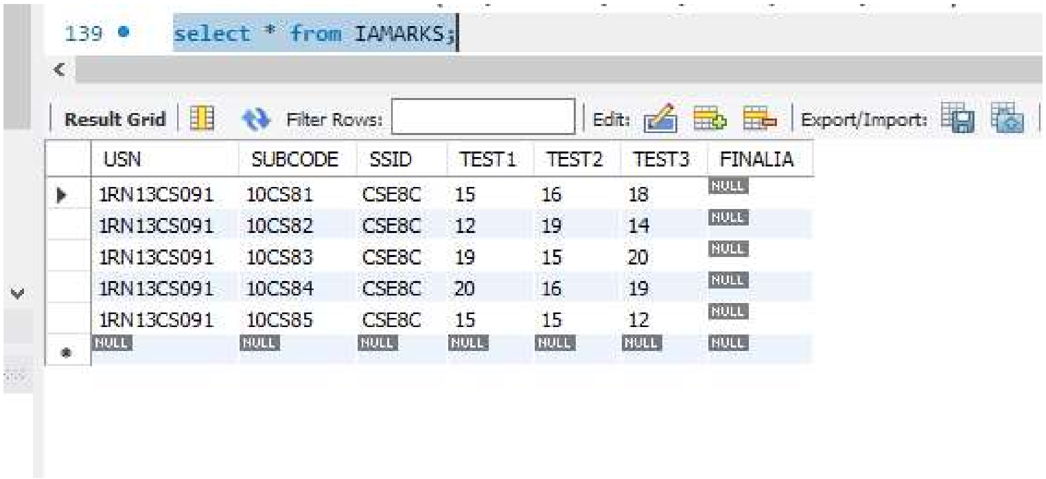
USN	SSID
1RN16CS045	CSE3A
1RN16CS088	CSE3B
1RN16CS122	CSE3C
1RN15CS011	CSE4A
1RN15CS029	CSE4A
1RN15CS045	CSE4B
1RN15CS091	CSE4C
1RN14CS010	CSE7A
1RN14CS025	CSE7A
1RN14CS032	CSE7A
1RN13CS020	CSE8A
1RN13CS062	CSE8A
1RN13CS066	CSE8B
1RN13CS091	CSE8C
NULL	NULL

```
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);
SELECT * FROM SUBJECT;
```



SUBCODE	TITLE	SEM	CREDITS
10CS71	OOAD	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

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);
select * from IAMARKS;



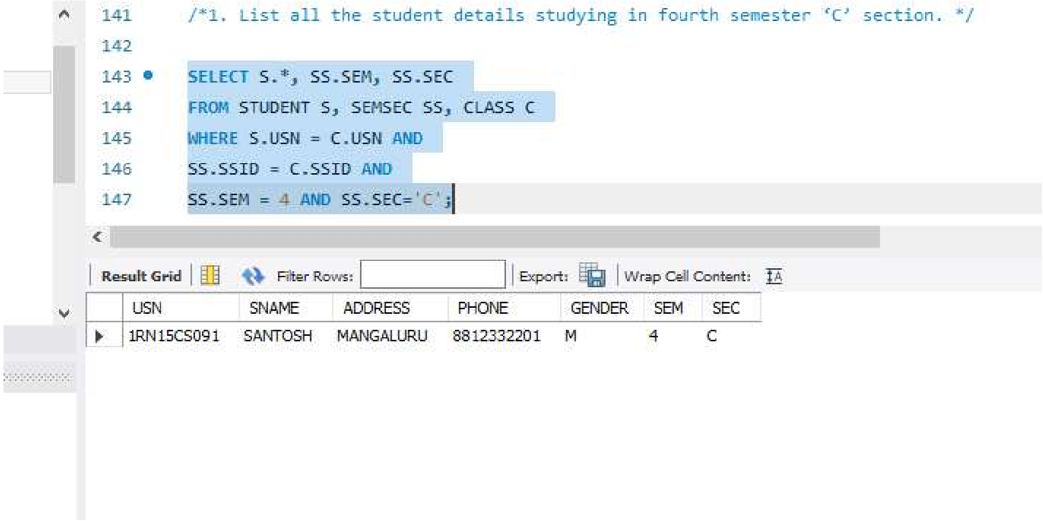
```
select * from IAMARKS;
```

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
NULL	NULL	NULL	NULL	NULL	NULL	NULL

/*1. List all the student details studying in fourth semester ‘C’ section. */

SELECT S.*, SS.SEM, SS.SEC
FROM STUDENT S, SEMSEC SS, CLASS C
WHERE S.USN = C.USN AND

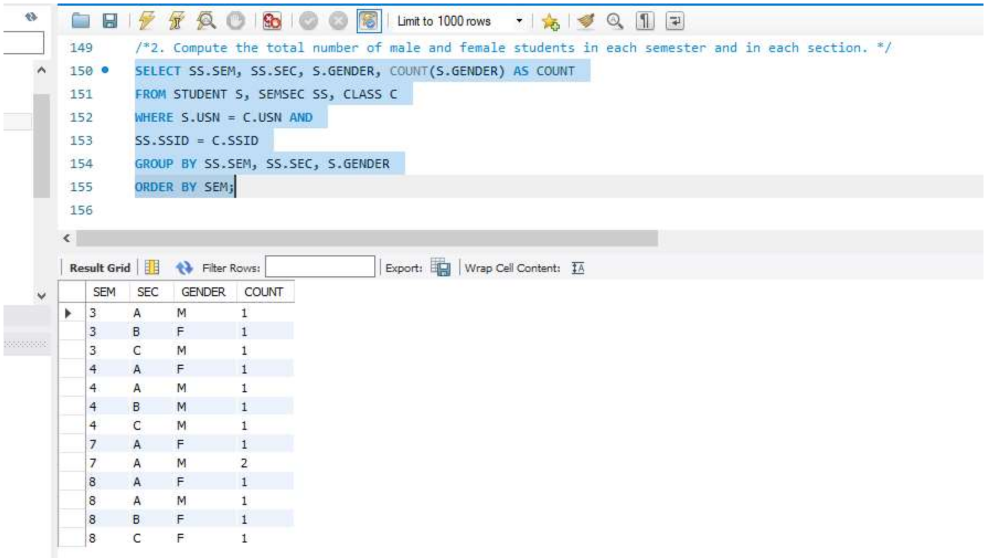
SS.SSID = C.SSID AND
SS.SEM = 4 AND SS.SEC='C';



```
/*1. List all the student details studying in fourth semester 'C' section. */

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	8812332201	M	4	C

/*2. Compute the total number of male and female students in each semester and in each section. */
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;

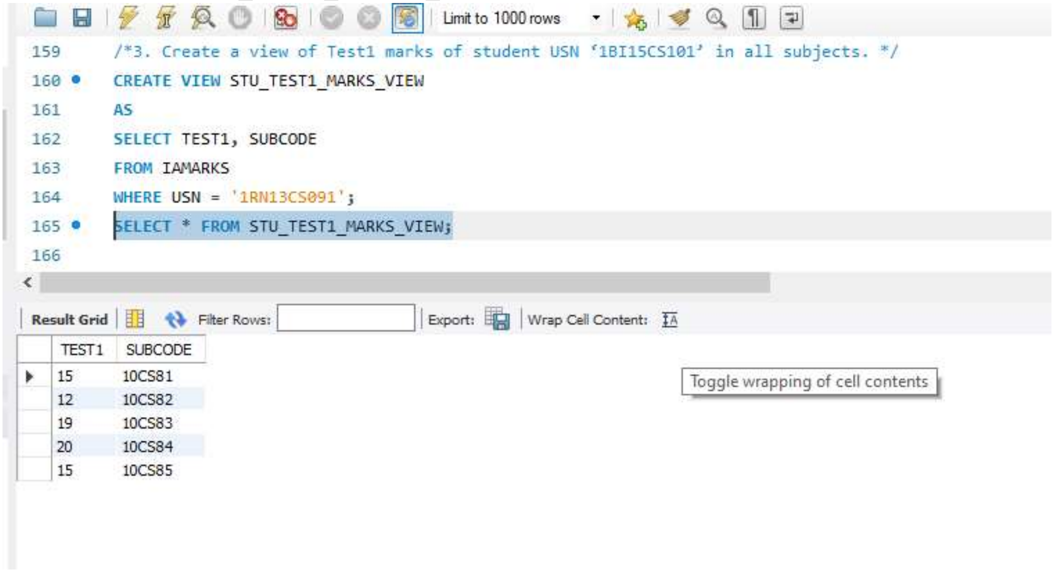


```
/*2. Compute the total number of male and female students in each semester and in each section. */
SELECT SS.SEM, SS.SEC, S.GENDER, COUNT(S.GENDER) AS COUNT
FROM STUDENT S, SEMSEC SS, CLASS C
WHERE S.USN = C.USN AND
SS.SSID = C.SSID
GROUP BY SS.SEM, SS.SEC, S.GENDER
ORDER BY SEM;
```

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

/*3. Create a view of Test1 marks of student USN '1BI15CS101' in all subjects. */
CREATE VIEW STU_TEST1_MARKS_VIEW
AS
SELECT TEST1, SUBCODE
FROM IAMARKS

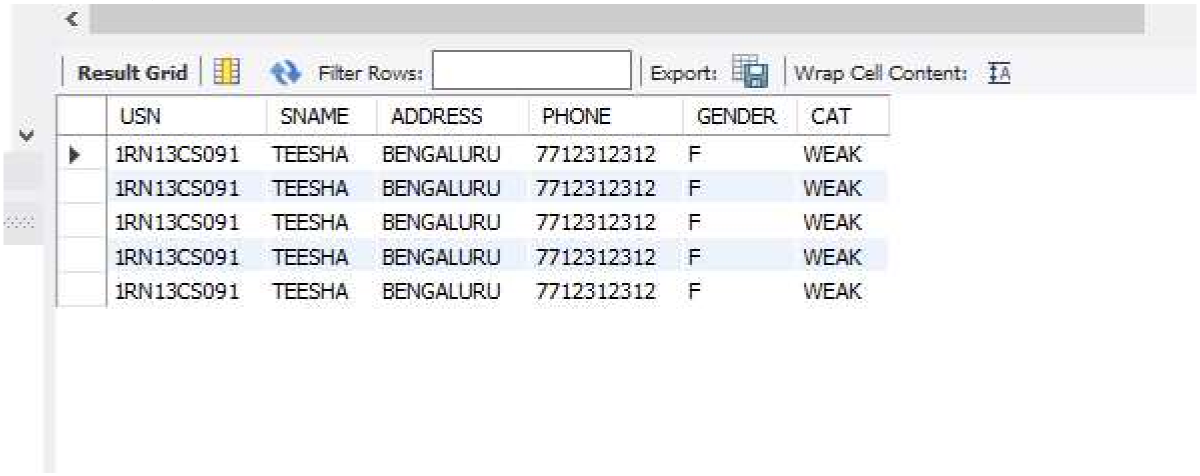
```
WHERE USN = '1RN13CS091';
SELECT * FROM STU_TEST1_MARKS_VIEW;
```



```
/*3. Create a view of Test1 marks of student USN ‘1BI15CS101’ in all subjects. */
CREATE VIEW STU_TEST1_MARKS_VIEW
AS
SELECT TEST1, SUBCODE
FROM IAMARKS
WHERE USN = '1RN13CS091';
SELECT * FROM STU_TEST1_MARKS_VIEW;
```

TEST1	SUBCODE
15	10CS81
12	10CS82
19	10CS83
20	10CS84
15	10CS85

```
/*5. Categorize students based on the following criterion:
If FinalIA = 17 to 20 then CAT = ‘Outstanding’
If FinalIA = 12 to 16 then CAT = ‘Average’
If FinalIA< 12 then CAT = ‘Weak’
Give these details only for 8th semester A, B, and C section students. */
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
SUB.SEM = 8;
```



USN	SNAME	ADDRESS	PHONE	GENDER	CAT
1RN13CS091	TEESHA	BENGALURU	7712312312	F	WEAK
1RN13CS091	TEESHA	BENGALURU	7712312312	F	WEAK
1RN13CS091	TEESHA	BENGALURU	7712312312	F	WEAK
1RN13CS091	TEESHA	BENGALURU	7712312312	F	WEAK
1RN13CS091	TEESHA	BENGALURU	7712312312	F	WEAK