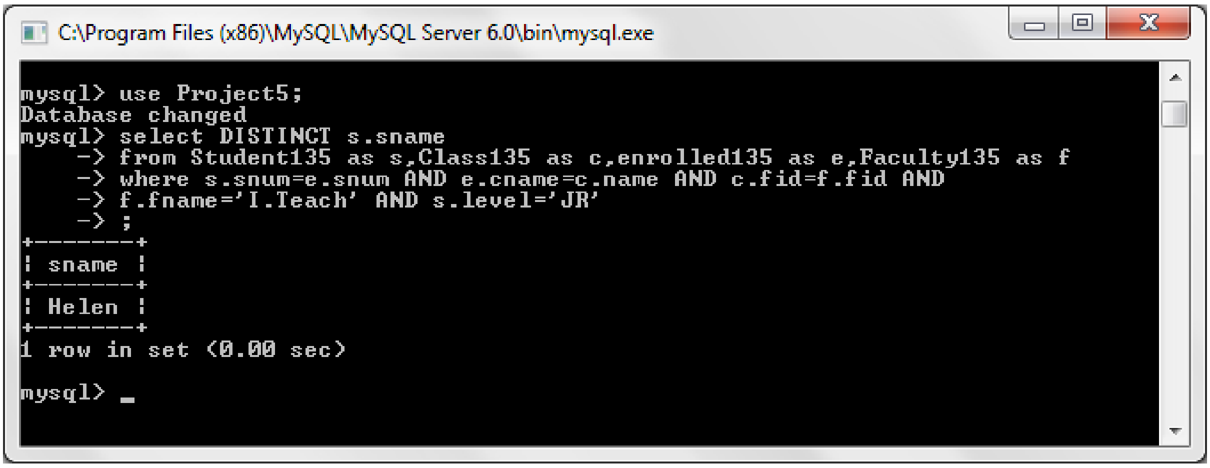
1) Find the names of the juniors (level=JR) who are enrolled in class taught by I.Teach.

SELECT DISTINCT S.Sname

FROM Student135 as S, Class135 as C, Enrolled135 as E, Faculty135 as F

WHERE S.snum = E.snum AND E.cname = C.name AND C.fid = F.fid AND

F.fname = ‘I.Teach’ AND S.level = ‘JR’;



```
mysql> use Project5;
Database changed
mysql> select DISTINCT s.sname
    -> from Student135 as s,Class135 as c,enrolled135 as e,Faculty135 as f
    -> where s.snum=e.snum AND e.cname=c.name AND c.fid=f.fid AND
    -> f.fname='I.Teach' AND s.level='JR'
    -> ;
+--------+
| sname  |
+--------+
| Helen  |
+--------+
1 row in set (0.00 sec)

mysql> _
```

2) Find the age of the oldest student who is either a History major or enrolled in c course taught by I.Teach.

SELECT MAX(S.age)

FROM Student135 as S

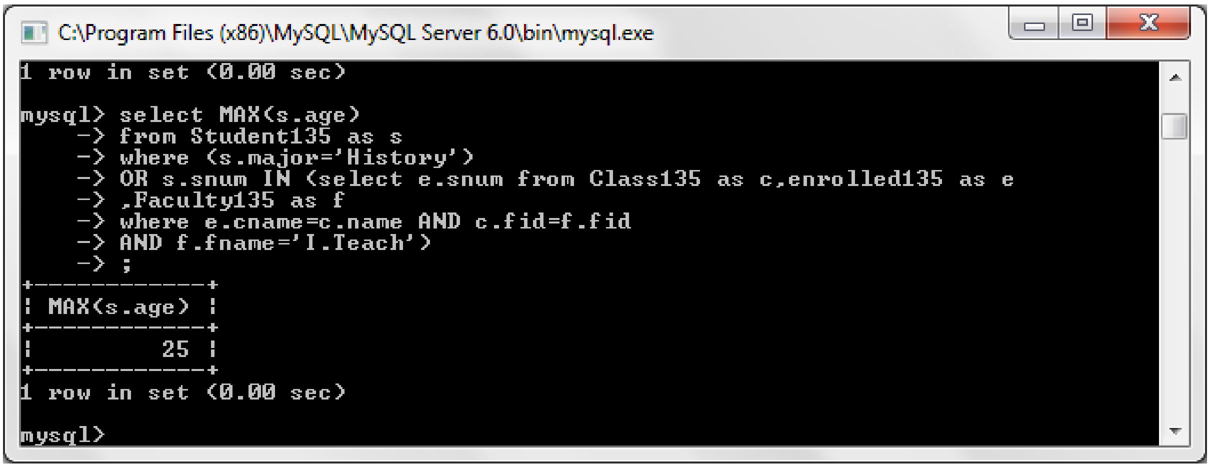
WHERE (S.major = ‘History’)

OR S.snum IN (SELECT E.snum

FROM Class135 as C, Enrolled135 as E, Faculty135 as F

WHERE E.cname = C.name AND C.fid = F.fid

AND F.fname = ‘I.Teach’)



```
1 row in set (0.00 sec)

mysql> select MAX(s.age)
    -> from Student135 as s
    -> where (s.major='History')
    -> OR s.snum IN (select e.snum from Class135 as c,enrolled135 as e
    -> ,Faculty135 as f
    -> where e.cname=c.name AND c.fid=f.fid
    -> AND f.fname='I.Teach')
    -> ;
+------------+
| MAX(s.age) |
+------------+
|         25 |
+------------+
1 row in set (0.00 sec)

mysql>
```

3) Find the names of all classes that either meet in room BA1080 or have two or more students enrolled.

SELECT C.name

FROM Class135 as C

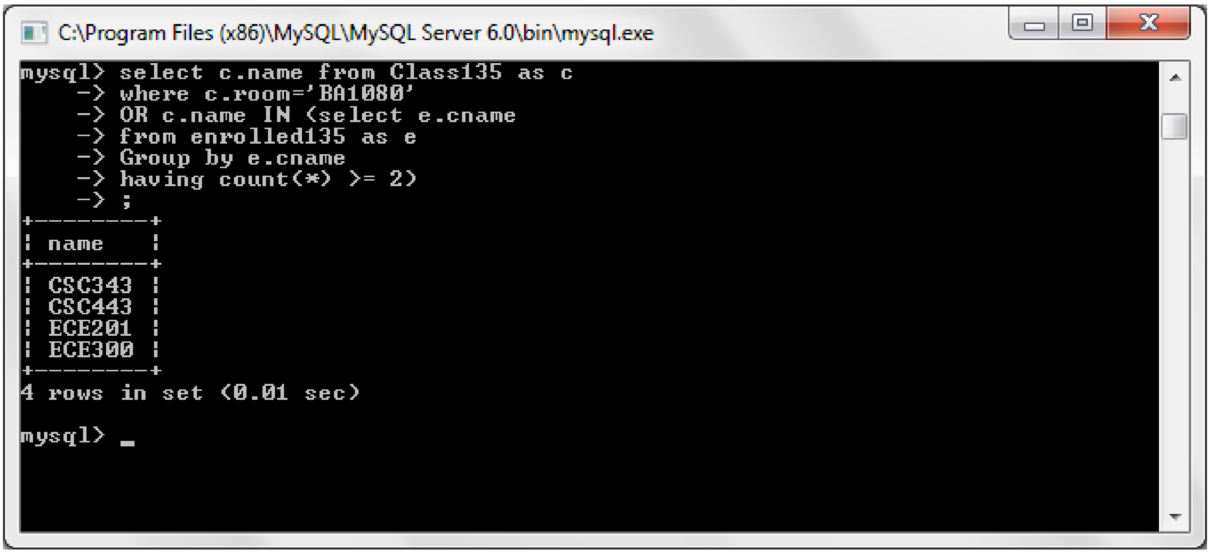
WHERE C.room = 'BA1080'

OR C.name IN (SELECT E.cname

FROM Enrolled135 as E

GROUP BY E.cname

HAVING COUNT (*) >= 2)



```
mysql> select c.name from Class135 as c
    -> where c.room='BA1080'
    -> OR c.name IN (select e.cname
    -> from enrolled135 as e
    -> Group by e.cname
    -> having count(*) >= 2)
    -> ;
+--------+
| name   |
+--------+
| CSC343 |
| CSC443 |
| ECE201 |
| ECE300 |
+--------+
4 rows in set (0.01 sec)

mysql> _
```

4) Find the names of all students who are enrolled in two classes that meet at the same time.

5) Find the names of faculty members who teach in every room in which some class is taught.

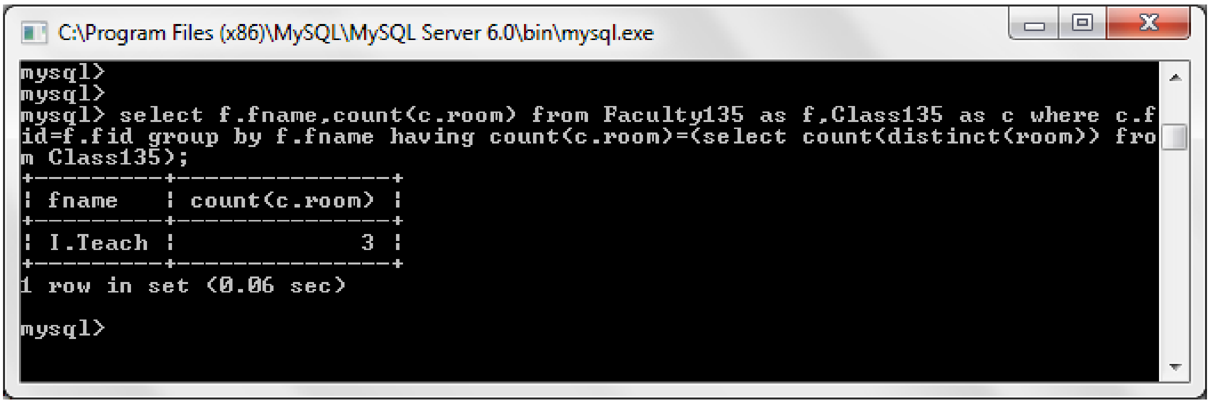
select f.fname,count(c.room)

from Faculty135 as f,Class135 as c

where c.fid=f.fid

group by f.fname

having count(c.room)=(select count(distinct(room)) from Class135);



```
mysql>
mysql>
mysql> select f.fname,count(c.room) from Faculty135 as f,Class135 as c where c.f
id=f.fid group by f.fname having count(c.room)=(select count(distinct(room)) fro
m Class135);
+----------+-----------------+
| fname    | count(c.room)  |
+----------+-----------------+
| I.Teach |               3 |
+----------+-----------------+
1 row in set (0.06 sec)

mysql>
```

6) Find the names of faculty members for whom the combined enrollment of the courses that they teach is less than five.

SELECT DISTINCT F.fname

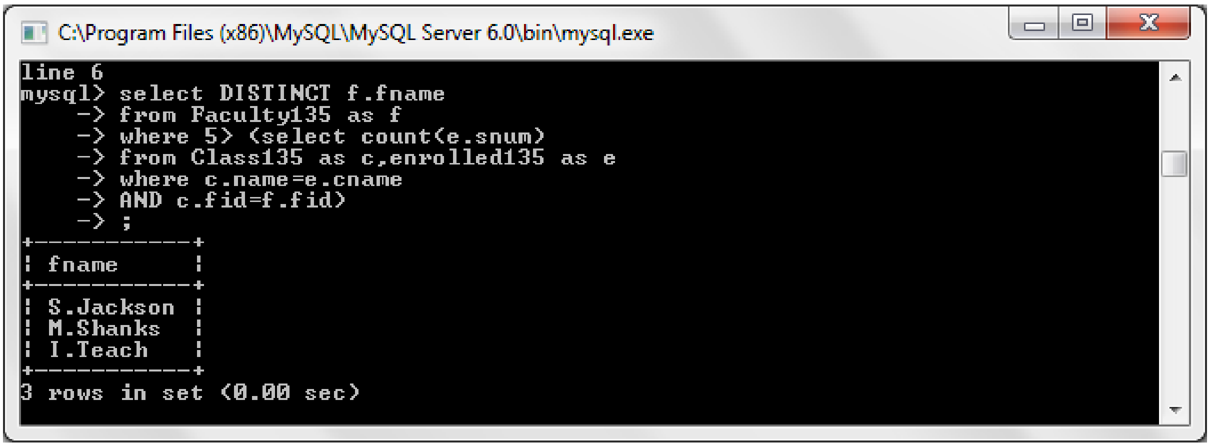
FROM Faculty135 as F

WHERE 5 > (SELECT COUNT (E.snum)

FROM Class135 as C, Enrolled135 as E

WHERE C.name = E.cname

AND C.fid = F.fid)



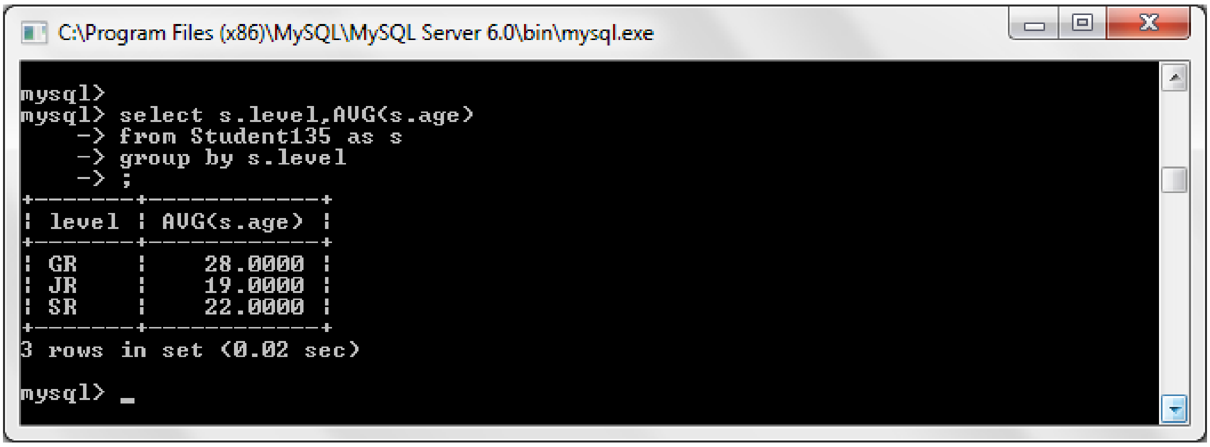
```
line 6
mysql> select DISTINCT f.fname
    -> from Faculty135 as f
    -> where 5> (select count(e.snum)
    -> from Class135 as c,enrolled135 as e
    -> where c.name=e.cname
    -> AND c.fid=f.fid)
    -> ;
+------------+
| fname      |
+------------+
| S.Jackson  |
| M.Shanks   |
| I.Teach    |
+------------+
3 rows in set (0.00 sec)
```

7) For each level, print the level and the average age of students for that level.

SELECT S.level, AVG(S.age)

FROM Student135 as S

GROUP BY S.level;



```
mysql>
mysql> select s.level,AVG(s.age)
    -> from Student135 as s
    -> group by s.level
    -> ;
+-------+------------+
| level | AVG(s.age) |
+-------+------------+
| GR    |    28.0000 |
| JR    |    19.0000 |
| SR    |    22.0000 |
+-------+------------+
3 rows in set (0.02 sec)

mysql> _
```

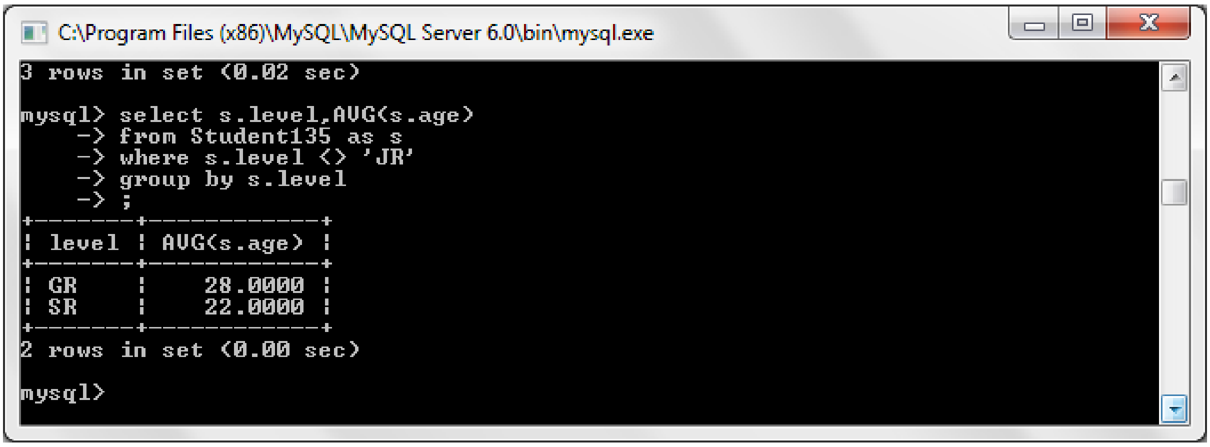
8) For all levels except JR, print the level and the average age of students for that level.

. SELECT S.level, AVG(S.age)

FROM Student135 as S

WHERE S.level <> ‘JR’

GROUP BY S.level



```
3 rows in set (0.02 sec)

mysql> select s.level,AVG(s.age)
    -> from Student135 as s
    -> where s.level <> 'JR'
    -> group by s.level
    -> ;
+-------+------------+
| level | AVG(s.age) |
+-------+------------+
| GR    |    28.0000 |
| SR    |    22.0000 |
+-------+------------+
2 rows in set (0.00 sec)

mysql>
```

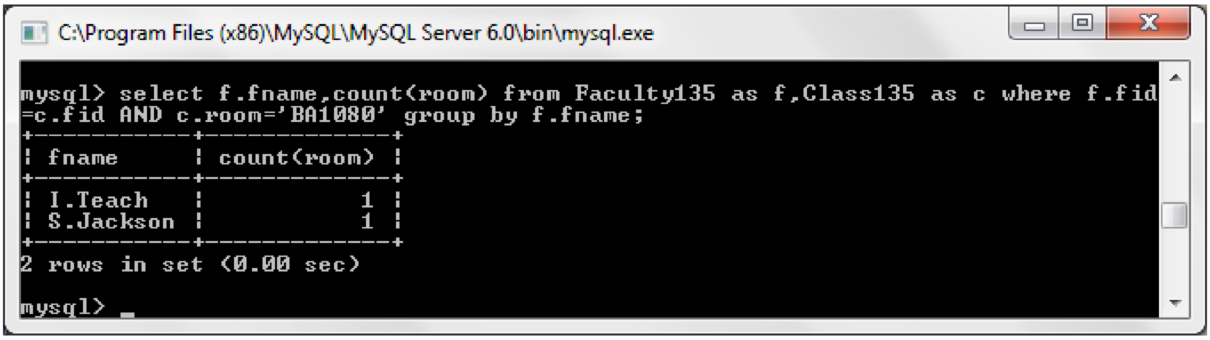
9) For each faculty member that has taught classes only in room BA1080, print the faculty members name and the total number of classes she or he has taught.

Select f.fname,count(room)

From Faculty135 as f,Class135 as c

Where f.fid=c.fid AND c.room='BA1080'

Group by f.fname;



```
mysql> select f.fname,count(room) from Faculty135 as f,Class135 as c where f.fid
=c.fid AND c.room='BA1080' group by f.fname;
+------------+-------------+
| fname      | count(room) |
+------------+-------------+
| I.Teach    |           1 |
| S.Jackson  |           1 |
+------------+-------------+
2 rows in set (0.00 sec)

mysql> _
```

10) Find the names of students enrolled in the maximum number of classes.