

/* Find all students with at least one mark > 60 */

```
select sname, sid
from student s
where s.sid in (select sid from grade where gmark > 60)
```

>> with exists

```
select sname, sid
from student s
where exists (select * from grade g where gmark > 60 and s.sid = g.sid)
```

/* find all students with all marks > 55 */

```
select sname, sid
from student s
where s.sid in (select sid from grade where gmark > 55) and
s.sid not in (select sid from grade where gmark <= 55)
```

/* find the student name and sid with the highest mark */

```
select sname, sid
from student s
where s.sid = (select g.sid from grade g where gmark = (select max(gmark) from grade))
```

/* find the student with the highest mark (and actually return that mark) */

(reminiscent of?)

```
select sname, s.sid, gmark
from student s, grade g1
where (s.sid = (select g.sid from grade g where gmark = (select max(gmark) from grade)))
and s.sid = g1.sid
```

>> the above won't really work

```
select sname, s.sid, gmark
from student s, grade g1
where (s.sid = (select g.sid from grade g where gmark = (select max(gmark) from grade)))
and (g1.gmark = (select gmark from grade g where gmark = (select max(gmark) from grade)))
```

>> the above works

```
select sname, s.sid, gmark
from student s, grade g1
where (g1.sid, g1.gmark) = (select g.sid, g.gmark from grade g where gmark = (select
max(gmark) from grade)) and g1.sid = s.sid
```

>> same as previous but less cluttered

>> with subquery in the from clause

>> try this first (creates the right table)

```
(select g.sid, gmark from grade g where gmark = (select max(gmark) from grade))
```

>> then

```
select sname, s.sid, gmark
from student s, (select gmark, sid from grade where gmark = (select max(gmark) from
grade)) as g
where s.sid = g.sid
```

/* list all marks along with the average mark */

```
select gmark , (select avg(gmark) from grade)
from grade
```

>> By removing avg it won't work: single value should be returned

/* list the student names and number of modules that each student has registered to */

```
insert into grade
(sid, mcode, gmark)
VALUES
(6, 'G52ADS', 80)
```

>> first try:

```
select count(g.sid) from grade g where g.sid = 1
```

>> then

```
select sname, (select count(g.sid) from grade g where g.sid = s.sid) as num_of_modules
from student s
```