

Datenbanksysteme I

5. Übungsserie

Aufgabe 1:

(a)

```
select *
from Studenten
where MatrNr in (
  select MatrNr
  from hoeren
  group by MatrNr
  having count(*) >= 3
)
```

(b)

```
select *
from vorlesungen
where vorlnr in (
  select vorgaenger
  from voraussetzen
  group by vorgaenger
  having count(*) >= 2
)
and SWS >= 4
```

(c)

```
with vorlSokrates as (
  select vorlnr
  from vorlesungen v join professoren p
  on v.gelesenvon = p.persnr
  where p.name = 'Sokrates'
)
select avg(semester)
from studenten
where matrnr in (
  select matrnr
  from hoeren h, vorlSokrates v
  where h.vorlnr = v.vorlnr
)
```

(d)

```
with hoerenCount as (  
  select matnr, count(*) anzahl  
  from studenten  
  where matnr not in (  
    select matnr  
    from hoeren  
  )  
  group by matnr  
union  
select matnr, count(*) anzahl  
from studenten  
where matnr in (  
  select matnr  
  from hoeren  
)  
group by matnr  
)  
select avg(cast(anzahl as float))  
from hoerenCount
```

Aufgabe 2:

(a)

```
with bolt as (  
  select *  
  from ZehnkampfD  
  where name = 'Bolt '  
)  
  
select distinct zehnkampfd.name  
from zehnkampfd, bolt  
where zehnkampfd.disziplin = bolt.disziplin  
and zehnkampfd.name != 'Bolt '  
and zehnkampfd.name not in (  
  select name  
  from zehnkampfd  
  where bolt.punkte >= zehnkampfd.punkte  
)
```