



Query Optimization

8. Exercise, Winter 2006/2007

Due 2006-12-12

1. Give building blocks for the following queries (each with both methods discussed in the lecture)

(a)

```
select s.name, s.matrn  
from studenten s  
where s.age>27 and  
count(s.hoert)=0
```

(b)

```
select s.name, s.matrn  
from studenten s  
where s.age>27 and  
count(s.hoert)<5 and  
exists v in s.hoert:  
v.name="Q0"
```

(3 Points)

2. Consider the join algorithms blockwise nested loop join, grace hash join and sort merge join. Give an example for each of these algorithms where the algorithm is superior to the others. (3 Points)
3. We have already seen that selections can be ordered by $\frac{1-s}{c}$. Adapt this formula for explicit attribute access. Does the ranking property still hold? Give an example. (4 Points)