

# Query Optimization

## 1. Exercise

Johannes Merkle  
Ralf Vogler

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### Exercise 1

Find all students that attended the lectures together with Schopenhauer, excluding Schopenhauer himself.

```
SELECT s2.name FROM studenten s1, studenten s2, hoeren h1, hoeren h2
WHERE s1.name='Schopenhauer' AND s1.matrnr=h1.matrnr AND s2.matrnr=h2.matrnr
AND h1.vorlnr=h2.vorlnr AND s2.matrnr<>s1.matrnr
```

Find all professors whose lectures attended at least two students.

```
SELECT p.name, COUNT(h.matrnr) AS hoerer FROM professoren p, vorlesungen v, hoeren h
WHERE p.persnr=v.gelesenvon AND v.vorlnr=h.vorlnr
GROUP BY p.name
HAVING COUNT(h.matrnr)>=2
```

### Exercise 2

Code in folder tinydb.