

### Exercise 1 (Understand the University Database Schema)

1. Load the university database in [SQLite](#).

```
sqlite3 university.db
```

2. Look at the database schema:

```
.tables
```

```
.schema <table-name>
```

3. Look at the instance (data in each table):

```
select * from <table-name>
```

4. Compare with the schema given in the lecture. Understand the meaning of the data in these tables, the primary keys and the foreign-key-relations between tables.

In particular, answer the following questions:

- (a) How many **instructors** can advise a **student**? Explain why.
- (b) How many **students** can an **instructor** advise? Explain why.
- (c) Can there be a **section** in a **time\_slot** which is not in the **time\_slot** table? Explain why.

### Exercise 2 (Formulate SQL Queries)

1. Find the names of all instructors who work for the physics department.
2. How many instructor names start with 'E'?
3. Find the names of all instructors that have taught in the Watson-building.