



Database System Concepts for Non-Computer Scientist – WiSe 20/21

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<http://db.in.tum.de/teaching/ws2021/DBSandere/?lang=en>

Sheet 10

Exercise 1

Write a SQL statement to create a view that gives an overview of the difficulty of each lecture. The difficulty of a lecture is defined as the sum of the weekly hours of that lecture and its direct predecessors. In our example instantiation of the university schema, the following query on your view should yield the result (only partially shown):

```
select * from LectureDifficulties;
```

lectureNr	title	difficulty
5216	Bioethik	6
4630	Die 3 Kritiken	4
...

Exercise 2

„Busy Students“: Find all students that have more weekly hours in total than the average student. Try to simplify the query using the with construct. (Also consider students that do not attend any lecture).

Exercise 3

ExamPoints			
StudName	ExerciseId	PossiblePoints	Score
Bond	1	10	4
Bond	2	10	10
Bond	3	11	4
Maier	1	10	4
Maier	2	10	2
Maier	3	11	3

Create a **view** in SQL for the *ExamResult*. An exam should be graded as passed if at least 50% of the possible points were scored. A view based on the example instantiation should look like the following (exercise continues on the next page):

ExamResult				
Name	PossiblePoints	Score	Ratio	Passed
Bond	31	18	0,580645	yes
Maier	31	9	0,290323	no

Notes:

- Create the underlying table for *ExamPoints* and think about what the **primary key** should be.
- The *ExamPoints* relation does not exist in our web interface. If you want to try out your query, use your own database or you can try using the <https://www.db-fiddle.com/> website. Here is a template for this exercise <https://www.db-fiddle.com/f/m6a86jvHaGT8cxUHD2Lep9/0>. Note that any DDL and DML statements have to be entered on the left panel and DRL statements on the right.