

Lecture 2

COMP207

Forgot to record first lecture

- Sorry: I forgot to start the recording on Tuesday, so the first lecture was not recorded
- It is not actually relevant for the exam, but:
 - I will upload an old version of motivation part
 - but missing some numbers and the negative examples and so on due to me spending some time looking into that this year
 - I will make a poll whether someone wants to hear a recording of me talking about the structure
 - It takes some effort (8 hours or so) to make the subtitles and if nobody cares, it is a bit of a waste...

Brief overview over videos

- The videos for this week are about most everything to do with SQL, except how to query them
 - Query = ask questions/get output
 - (I will use 1 query here in these lectures though, namely the simplest possible one)

More detail

- Specifically, the videos cover:
 - The history of SQL
 - How to create a database
 - How to create tables
 - How to create constraints (UNIQUE, FOREIGN KEY, PRIMARY KEY)
 - How to insert, remove and add information to the tables
 - SQL Injections (not required for the exam)

Together called data definition language



This + queries = formally: data manipulation language
(informally: CRUD)

Examples covered today

- How to access the university server in MySQL
- How to create a database
- Persistency
- How to create a table
 - Examples from the exam two years ago and the assignment from the last two years
- How to create constraints
- How to insert data
- How to update data (with some comments on WHERE)
- How to delete data
- SQL Injections

Conditions in WHERE clauses

- Comparisons: =, <, <=, >=, >, <> (or != for the last)
 - Used for equals, strictly less than, less than or equal, greater than or equal, strictly greater and not equal of e.g. numbers
- Conditions can contain:
 - AND
 - E.g. if you want both that the name is Oliver and the programme is G402, you write WHERE name = 'Oliver' AND programme = 'G402'
 - OR
 - Similar to AND, but used if you want or...
 - NOT
 - If you want everything but something in particular
 - BETWEEN
 - E.g. "Price BETWEEN 10 AND 20" if you want the price to be between 10 and 20
 - LIKE
 - For string matching
 - _ matches any 1 letter and % any number of letters
 - E.g. "Name LIKE 'O%r'" and "Name LIKE 'O____r'" matches Oliver

Conditions in WHERE clauses cont.: IN

```
DELETE FROM Students  
WHERE name IN ('John','Sebastian');
```

Special version using queries –
see the video on queries – the
optional part

Students

name	number	programme
Anna	20171989	G402
Oliver	20171112	G702
Danny	<i>null</i>	G702
John	<i>null</i>	G702