# 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

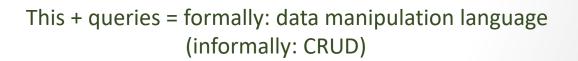
- The videos for this week are about most everything to do with SQL, except how to query them
  - Query = ask questions/get output
  - (I will use 1 query here in these lectures though, namely the simplest possible one)

## More detail

- Specifically, the videos cover:
  - The history of SQL
  - How to create a database
  - How to create tables

Together called data definition language

- 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)



## 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	null	G702
John	null	G702