Why are Databases so cool?
3 reasons:
Normal Forms
1NF, 2NF, 3NF, BCNF, ...
SELECT s_name, s_address
Normal Forms
E/R
SQL
=using a DBMS
VS.
understanding the technology!
Why is Database Technology so cool?
Database Systems
6 different things:
Data Layouts
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<th>ID</th>
<th>name</th>
<th>city code</th>
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makeBread(List ingredients){
    Bread bread = new Bread();
    Oven oven = new Oven();
    bread.add(flour);
    bread.add(salt);
    bread.add(water);
    while(!bread.isSmooth()){ 
        bread.knead();
        Thread.sleep(40min);
        oven.setHeat(200C);
        Thread.sleep(20min);
        bread.rollIntoRoundShape();
        oven.insert(bread);
    }
}
SELECT * 
FROM Fotographen 
WHERE NOT EXISTS (...) 

for (int i=0; i<rowMax;i++) {
    row = read(Student);
    ...
}

SQL                           program
Hardware
Users
Database Systems

= Data Layout + Data Structures + Algorithms + Hardware + Systems + Users
“Why should I care?”
pick 1 out of 4 reasons!
reason #1
simply interesting
or reason # 2
impact on your software
int a = 42;
int[] array = new int[]{
45, 89, 12,
};
ht = new HashTable(...)
Database.connect(...
The graph compares the runtime for naive and smart approaches. The naive approach has a runtime of 1000 seconds, whereas the smart approach has a runtime of 1 second.
or reason #
competitive advantage
true expert
vs.
“configurator“
or reason #
exciting opportunities
research, industry, and: startups
Database Systems
=
mature field?
More DB-stuff (in English and German)

http://datenbankenlernen.de
http://www.youtube.com/jensdit
http://infosys.uni-saarland.de
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