

DB Agenda

Agenda DB330 Database Theory and Applications

Relational database thinking - w11s18 (29-Mar)

- ☐ Group exercise: relational database thinking
- ☐ Object-relational mapping in editor.ponyorm.com
- ☐ Presentation of your ideas

Group exercise

Most importantly: DO NOT FEEL RESTRAINED BY REALITY (including your own technical abilities).

Areas of interest could include:

- Video games
- Sports
- Alien civilizations
- Weather on Mars
- Tank movements in the Ukraine-Russia war
- Ecological data
- Immigration
- Kardashians
- The 100 richest people on Earth
- etc.
- ☐ Go into groups of 2-3 people - generate 1 solution per group
- ☐

Which database content you'd find personally interesting

1. ☐ which area of knowledge or activity?
2. ☐ which entities are worth measuring and recording?
3. ☐ which variables would you measure?
4. ☐ which data types do these variables come in?
5. ☐ how "big" are your data?
6. ☐ which queries would be interesting?
7. ☐ write a couple of queries in pseudocode!
8. ☐ which graphical outcomes would you like to see?
9. ☐ is your information tabular/relational or not? If it is, how many tables do you think there are and what are their relationships?
10. ☐ Put your results into the ponyorm editor (see below)

Get ready to present your results as a group!

Example: Seinfeld foods

1. **Area:** of interest: Food science, advertising, marketing
2. **Entities:** Food types, foods, shows, actors, humor, US food sales data, viewer data
3. **Variables:** Food type, food name, show episode, actor name, humor index, food type sales figures, viewer age

4. **Data types:** text, integer, double
5. **Big data:** yes if sales and viewers included, certainly when doing this in real time
6. **Queries:** "how many more burgers were sold after Kramer ate a burger in episode 5?"
7. **Pseudocode:** SELECT count(*) FROM food_type, actors, episodes WHERE episode = 5 GROUP BY burgers
8. **Graphs:**
9. **DB type:** relational (tables)
10. See [foods database in ponyorm](#)

Ponyorm editor

- Go to editor.ponyorm.com and sign up for the free plan
- Click on "Create diagram" (blue button)
- Name your diagram, describe it briefly, set to PUBLIC
- Create entities with "New Entity"
- Add attributes (= variables) with "Add attribute"
- Add relationships with "Add relation"
- Share the public link with everyone when presenting

Presentations

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