Formal Concept Analysis
Welcome and Organizational Issues

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Organization

Lectures and Exercises

lecture Monday, 11:10 – 12:40, room APB E005

hands-**on** exercise Monday, 13:00 – 14:30, room APB 2026

Course Web Page

`https://iccl.inf.tu-dresden.de/web/Introduction_to_`
`Formal_Concept_Analysis_(WS2022)`

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Organization

hands-on exercise means

- *autonomous work* on the practice sheet in small teams of 3-4 students, under supervision
- *no general repetition* of lecture material
- *no demonstration* of the sample solution (will be provided later)

necessary for that is

- making notes during the lecture
- performing autonomous follow-up course work *before* the exercise
- bringing material and your notes to the exercise
- developing own activity

Organization

Why this exercise concept?

- active development of the lecture material is more effective
- discovering relationships in the material
- learning structured thinking and autonomous working
- learning team work
- learning to explain things
- exercise for the exams ;-)
- *You have finished your study of . . . Your personal strengths include pro-activity and team work, you are communicative and willing to cooperate.* (typical job advertisement)

Overview

1. Organization
2. Contexts, Concepts, and Concept Lattices
   1. Concept Lattices
   2. Multi-valued Contexts and Conceptual Scales
3. Closure Systems and Implications
   3. Closure Systems
   4. Implications
4. Knowledge Discovery
   5. Attribute Exploration
5. Extensions of FCA
   6. Triadic Formal Concept Analysis