Exercise 13

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Outline

1. Exam: Organization
2. Exam: Content
3. Exam: Task types
4. Exam: Preparation
5. Q&A

Exam: Dates and Facts

- Date: March 05, 12:00-14:00
- 10-15 min: read tasks and ask questions
- Writing time: 90 min (exactly!)

Exam: Dates and Facts (2)

- You should bring:
  - Pen(s) in black or blue (no red, green; no pencils)
  - ID card
  - Student card
- You are allowed to use:
  - Calculator (unlikely that you need it...)
  - Dictionary
- No other electronic devices

Exam: Points

- There will be 100 points on the exam
- Points in the exercise:
  - Theory: 19+15+21+20+22+17+21=135
  - Programming: 20+22+20+20+20=102
  - Total: 237
- Bonus: linearly increase in points if you achieve at least 40 % in both exam and exercise class
- Maximal 18 bonus points
- if you have n points, your bonus is

$$b = \begin{cases} 0, & n \leq 93 \\ (n - 93) * 0.125, & n > 93 \end{cases}$$

- Ceil to the next .5 step

Some hints on writing an exam

- First read all the questions
- Decide which questions to answer first
- The points are roughly linear to the time spent on each question
- In average: less than a minute per point!
- Do not dwell on one exercise too long!
- Make sure to read your answers before handing in!

Exam: Content

1. Basics of P2P
    - Motivation, contrast to central server, look-up strategies
2. Unstructured Systems
    - Gnutella, Kazaa, Bittorrent
3. Structured Systems
    - Chord, Pastry/Tapestry, CAN, Kademlia
4. Analysis of P2P
    - Graph Theory, Markov Chain
5. Application
    - OSNs, Darknets, Streaming

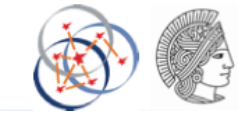
Exam: Task Types

1. Reproduction of knowledge
   - e.g.: *How is a file published in Bittorrent?*
2. Application of knowledge
   - e.g. *Construct the routing table of node X in Kademlia.*
3. 'Interpretation/Extension' of knowledge
   - e.g. *Determine the routing length distribution for Kademlia based on Markov Chains.*

Exam: Preparation

- Content of the lecture is basis for exam
- Meaning: *In theory*, you can achieve 100 % of the points without having a look at the exercises.
- But: Exercises help you to apply and interpret the content.
- Office hours (Stefanie): Each monday 11-12 AM, A312
- Office hour (Jan): tba

Q&A: Locality in Pastry/Tapestry



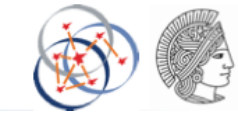
Question: If there are several nodes with the same prefix in Pastry, which one is chosen for the routing table?
Answer: The one that is closest with regard to the underlay distance.

Q&A: Domains and IPs

Question A: Can several domains share one IP address?
Answer: Yes. Actually, servers generally group several small domains under one address.
Question B: Can one domain have several IP addresses?
Answer: Yes. Simply host your domain on multiple servers.

IP address represent location, not content!

Q&A: Modeling Chord Routing



Question: Is it important for the exam?
Answer: Yes. But you don't need to learn the formulas, just be able to apply the idea.