Part I

Organizational Matters

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- Modul: IN2003
- Name: “Efficient Algorithms and Data Structures”
  “Effiziente Algorithmen und Datenstrukturen”
- ECTS: 8 Credit points
- Lectures:
  - 4 SWS
    Mon 10:00–12:00 (Room Interim2)
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- Webpage: http://www14.in.tum.de/lehre/2017WS/ea/

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The Lecturer

- Harald Räcke
- Email: raecke@in.tum.de
- Room: 03.09.044
- Office hours: (by appointment)

Tutorials

A01 Monday, 12:00–14:00, 00.08.038 (Schmid)

A02 Monday, 12:00–14:00, 00.09.038 (Stotz)

A03 Monday, 14:00–16:00, 02.09.023 (Liebl)

B04 Tuesday, 10:00–12:00, 00.08.053 (Schmid)

B05 Tuesday, 12:00–14:00, 03.11.018 (Kraft)

B06 Tuesday, 14:00–16:00, 00.08.038 (Somogyi)

D07 Thursday, 10:00–12:00, 03.11.018 (Liebl)

E08 Friday, 12:00–14:00, 00.13.009 (Stotz)

E09 Friday, 14:00–16:00, 00.13.009 (Kraft)

Assignment sheets

In order to pass the module you need to pass an exam.

Assessment

Assignment Sheets:

- An assignment sheet is usually made available on Monday on the module webpage.
- Solutions have to be handed in in the following week before the lecture on Monday.
- You can hand in your solutions by putting them in the mailbox "Efficient Algorithms" on the basement floor in the MI-building.
- Solutions have to be given in English.
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- Submissions must be handwritten by a member of the group. Please indicate who wrote the submission.
- Don't forget name and student id number for each group member.

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Assessment

Assignment can be used to improve you grade

If you obtain a bonus your grade will improve according to the following function

It will improve by $\ldots$ for $\ldots$ respectively.

Examples:

Assessment

Assignment can be used to improve you grade

- If you obtain a bonus your grade will improve according to the following function

$$f(x) = \begin{cases} \frac{1}{10}\text{round}\left(10\left(\frac{\text{round}(3x)-1}{3}\right)\right) & 1 < x \leq 4 \\ x & \text{otw.} \end{cases}$$

- It will improve by 0.3 or 0.4, respectively. Examples:

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  Examples:
  - $3.3 \rightarrow 3.0$
  - $2.0 \rightarrow 1.7$
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Assessment

Requirements for Bonus

- 50% of the points are achieved on submissions 2–8,
- 50% of the points are achieved on submissions 9–14,
- each group member has written at least 4 solutions.

1 Contents

1 Contents

- Foundations
  - Machine models
  - Efficiency measures
  - Asymptotic notation
  - Recursion
- Higher Data Structures
  - Search trees
  - Hashing
  - Priority queues
  - Union/Find data structures
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2 Literatur

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