Frankfurt University of Applied Sciences (FRA-UAS)
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Applicants for
Supervision of a Bachelor / Master Thesis

Fachbereich 2 l Faculty 2
Informatik und
Ingenieurwissenschaften l
Computer Science and Engineering

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Datum: 2023

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Guidelines and Hints for Bachelor and Master Theses

Before You Start Off: General Remarks and Requirements

- Find a topic which you really like. Ask as many people as possible for doing that.
- Get to meet (face-to-face) you potential thesis advisor (short meeting, ca. 30 min) in order to explain and discuss your topic.
- You are requested to write a "Thesis Proposal" (also known as „Exposé") prior to the start of the work. The idea of writing such a proposal is to
  - apply for the (supervision of the) topic,
  - familiarize yourself with your potential topic, and
  - to have a reference document for the time of your on-going work.
- Requirements on the contents and layout of your proposal:
  - approximately two pages
  - must contain a summary of the contents of your planned work and its contribution (your contribution)
  - must contain the methods and techniques you are intending to use and how
  - must contain an initial version of your work's table of contents
  - plus: an additional page with a schedule of your work (coarse time plan with dates, deadlines, and milestones)
- The quality of this thesis proposal decides on whether your application for supervising your thesis will be accepted or not.
- If you are going to prepare your thesis in cooperation with an industrial company, please make sure that no restriction note applied („Kein Sperrvermerk"). This will allow you to report and write freely and without any restrictions about your work.

During Your Work: General Remarks and Requirements

- Report once every three weeks by e-mail (to be sent to tgabel@fb2.fra-uas.de) on the state of your work, your progress as well as encountered problems and next steps.
  - Also include eventual changes to your time plan.
  - Two (Bachelor) and five (Master), respectively, such short reports during the running time of your thesis are requested; each one generally no longer than one page, pure e-mail text is sufficient as well.

- Report after approximately half of your thesis' duration (Bachelor: after ca. 1 month, Master: after ca. 2.5 months) in person to your advisor on your progress (short meeting, ca. 30 min).
- Always keep in mind the difference between a Bachelor and Master Thesis. So, a Master Thesis
  - focuses on a project that is roughly 2-3 times as complex, difficult, and comprehensive as a Bachelor Thesis project
  - should also bring up new insights and be closer to research topics, whereas a Bachelor thesis is in general even more application-oriented and implementation-oriented.

During Writing Down the Thesis: General Remarks and Requirements

- The thesis itself should be written in excellent German/English (grammar and orthography).
- The thesis itself should in general comprise not less than 25 (Bachelor) or 50 (Master) pages.
- Any thesis must include a delineation of the basics, foundations and state of the art of the respective topic area. This includes also a reflection of related work. And, of course, introduction, summary, as well as a bibliography (list of references) are mandatory.
- The preferred word processing system should be Latex.
- Probably most important (with respect to your grade): At least 50% of your thesis must be made up of your own work, i.e. your own contributions.
  - This includes your ideas, concepts, approaches taken, algorithms developed, problems encountered and solved, experiments performed, as well as results achieved. So, you must provide answers to questions like:
    - What is new?
    - What is the special point in your approach taken?
    - Why is your method / technique / approach suitable and perhaps even better than the state of the art?
    - Can you provide empirical or theoretical evidence that the approach suggested in the thesis really works?
  - This excludes „formal" parts of your thesis (which are, nevertheless, required as well) like introduction, state of the art, foundations and background information, related work, outlook and summary. It also excludes source code you implemented (which may be partially included in an appendix).