RWTH AACHEN UNIVERSITY

Lehrstuhl Informatik 5
Information Systems
Prof. Dr. M. Jarke

The Fantastic Title of Your Work Here

(Proposal for)
Master Thesis / Diplomarbeit / Bachelor Thesis
Software Systems Engineering / Media Informatics / Informatik

John Doe
Matriculation number 123456

February 22, 2012

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Prof. Dr. Second Advisor

Advisors:
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Dipl.-Inform. N.N.
N.N., M.Sc.

Contents

Chapter 1

Introduction

- Background / Context of the thesis
- If applicable: describe the project the thesis is related to (e.g., CoCar)
- Problem / Motivation
- Goals of the thesis
- For final thesis document: outline of the document

This is an example for a citation [KQCJ07].

1.1 Figures

Use vector graphics wherever possible and avoid bitmap images. Do not use JPG at all (they are often blurred because of the compression). If you have to include a bitmap graphics, use the PNG format. If you have to use a JPG (as in the case for the logos on the title page), make sure that these are images with high resolution and high quality.

The preferred way to create a PDF image to be used in LaTeX is the following:

1. Do the image with your favorite graphics program (Powerpoint works well for many cases).
2. Print/Save the image as a PDF file (Acrobat Professional might be required, but there also Open Source solutions, e.g. FreePDF)
3. Crop the image file and remove white margins.
4. Include it in LaTeX as in this example.

How to refer to images: Figure 1.1 shows something from [ALM02] whereas figure 1.2 is about [Len02].

If your image is not your own and taken from another source, cite the source also in the caption.

Figure 1.1: The text under the figure [ALM02]

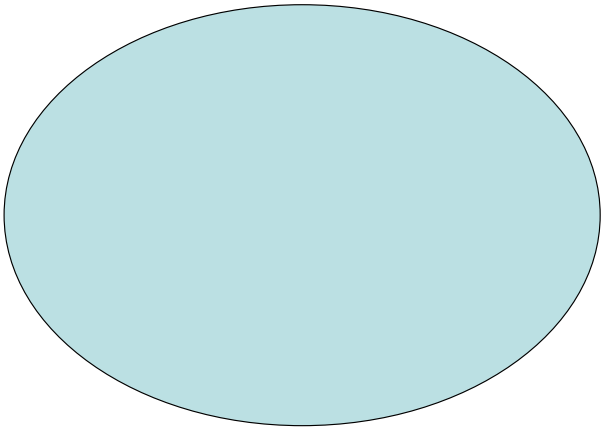

Figure 1.2: Another text under this figure [Len02]

Chapter 2

Related Work

- Which similar/related works have been carried out?
- If applicable: structuring of related work is good (e.g., if you have multiple related fields)
- What is deficient in these works and what do they lack?
- Compare the existing approaches in a table (different approaches in rows, features/requirements in columns) and give a final discussion why a new approach (your thesis) is necessary

2.1 Section 1

The Chair of Computer Science 5 - Information Systems works on the formal analysis, prototypical development, and practical testing of meta-information systems. These systems are used to document and coordinate the distributed design, integration, and evolution of database-centered applications in computer science. Our research topics include Engineering Information Systems, Metadata in Community Information Systems, Mobile Applications and Services, Database and Meta-Database Technology, Technology Enhanced Learning and Model Management.

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Chapter 3

Solution

Give a (detailed) description of the approach:

- give reasons, why you decided for specific parts of the approach
- its also a good idea to compare with related work (because this approach did not work so well in [KQLL07] the authors used..)
- In the proposal: a rough design (e.g., an architecture, algorithm) of the approach, clarifying what will be done by you and what is already there/is a ready-to-use part (e.g., a library, product you use). Give also some details about the technologies which you want to use in the thesis project.
- In the thesis: a conceptual description of your approach. Important: do not go into implementation details at this stage. Give an overall picture (e.g., system architecture, data flow diagram, sequence diagrams for an algorithm, etc.). Explain the main components of your solution and give short description of any external or existing component which is used by your system. Give conceptual models (e.g., EER diagrams) of your data structures.
- Important: describe the *process* of getting to the final solution, do not describe only the final solution. All design decisions are important (I preferred X, because Y performs badly).

Chapter 4

Evaluation

- In the proposal: describe the data sets and measures which you plan to use in the evaluation. Make sure that the resources (data, users, etc.) which are required for the evaluation are really available.
- In the thesis: describe the data sets and measures which you have used. Give the results in form of diagrams (e.g., Excel or Gnuplot). Discuss different variants of your solutions and different parameter settings. If available, compare your results with an existing approach. Important: Also negative results are results: "The approach did not work for this data set because ..." This is important information, because nobody wants to do again the same experiments as you already did. In case of performance numbers, give a detailed description of the hardware which was used to do the experiments. Discuss the results (what is good, what is bad).

Chapter 5

Timeplan

- Include a gantt chart here (do it with MS Visio or Excel), it should have about 10 tasks clustered into about 4 groups: literature study, design, implementation, evaluation.
- Give a brief explanation of the timeplan.

Bibliography

[ALM02] Afrati, F. N., Li, C., and Mitra, P. Answering Queries Using Views with Arithmetic Comparisons. In Popa [Pop02], pp. 209–220.

[KQCJ07] Kensche, D., Quix, C., Chatti, M. A., and Jarke, M. *GeRoMe*: A Generic Role Based Metamodel for Model Management. *Journal on Data Semantics*, VIII:82–117, 2007.

[KQLL07] Kensche, D., Quix, C., Li, X., and Li, Y. *GeRoMeSuite*: A System for Holistic Generic Model Management. In Koch, C., Gehrke, J., Garofalakis, M. N., Srivastava, D., Aberer, K., Deshpande, A., Florescu, D., Chan, C. Y., Ganti, V., Kanne, C.-C., Klas, W., and Neuhold, E. J. (eds.), *Proceedings 33rd Intl. Conf. on Very Large Data Bases (VLDB)*, pp. 1322–1325. Vienna, Austria, 2007.

[Len02] Lenzerini, M. Data Integration: A Theoretical Perspective. In Popa [Pop02], pp. 233–246. `http://dx.doi.org/http://doi.acm.org/10.1145/543613.543644`.

[Pop02] Popa, L. (ed.). *Proc. 21st ACM Symposium on Principles of Database Systems (PODS)*. ACM Press, Madison, Wisconsin, 2002.