Exploring software systems
Moonen, L.M.F.

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Preface

Here, in the first part of my thesis for all of you to read and the last part for me to write, I would like to thank all the people that have helped me getting to this point.

First of all, I am very grateful to my promotor, Paul Klint, for offering me the opportunity to do the research that is described in this thesis, and for offering me a deadline that enabled me to actually finish the thesis. I started working for Paul eight years ago while doing the practical work for my engineering degree and surely there must have been times that he thought to never get rid of me. Working for Paul has been a very pleasurable experience with lots of freedom for pursuing my own interests.

A special word of thanks goes out to my co-promotor, Arie van Deursen. His interest, encouragement and enthusiasm were always stimulating and he has taught me a lot about writing scientific papers and doing research in general. Besides being my supervisor and mentor, Arie has become a good friend with whom I could talk about life, Julia, books, Julia, the opera, and just now and then about his daughter Julia… I have truly enjoyed working together with Arie, and our cooperation turned out to be a productive one, which is shown by the fact that he was a co-author for half of the chapters of this thesis (Chapters 4, 5, 7, 9 & 10).

Tobias Kuipers has been there since I started studying at the UvA. His endless supply of interesting ideas and outspoken opinions were always good for long and fruitful discussions. We had great fun and hanging around with Tobias has taught me to express myself (although I will probably never become as good as him ;-). Tobias’ research at CWI was closely related to mine: We both worked on software renovation issues and he is the co-author of Chapter 6 in which we connect my work on type inferencing to his work on concept analysis. Another important connection is our involvement in the Software Improvement Group (SIG), a spin-off company that we started together with Paul, Arie and others to transfer our research ideas into practice. The start of this company introduced some delays in the finishing of this thesis, not only because real work had to be done, but also because dealing with problems from practice provoked some additional research questions that just had to be pursued.

It was our experience with real-life software development in this company that inspired the work described in Chapter 9, which was co-authored by two of SIG’s hardcore developers: Alex "you're too technical for me" van den Bergh and Gerard Kok.
Eva van Emde is the co-author of Chapter 8 on quality assurance using code smells. Eva visited us at CWI at a point where it was thought that I could finish my thesis by writing the introduction. However, our ideas on exploring smelly code fitted in too nicely to just ignore them and gave me another excuse for a short delay. Our common interests in electronic music, gothic literature, rock climbing and whitewater kayaking resulted in lots of highly enjoyable, off-topic, discussions and coffee breaks with demonstrations of rescue techniques. If I ever go paddle (or more likely, swim) a class V rapid, I hope Eva will be there to watch out for me.

I thank the members of my reading committee prof.dr. Hausi Müller, prof.dr.ir. Loe Feijs, prof.dr. Mike Papazoglou, prof.dr. Jan Bergstra, prof.dr. Peter van Emde Boas, and prof.dr. Martin Kersten, for their careful review of this thesis.

Merijn de Jonge and Joost Visser shared an office with me at CWI. They have both contributed to the work described in this thesis, by listening while my half-baked ideas took form and by developing elaborate tools that I could build upon for my experiments. Although we have never gotten around to writing a paper together, we have discussed lots of interesting issues that ought to be investigated further and written down (so let’s really start project M335).

In addition to the people mentioned above, I would like to thank Jan Heering for his constructive comments on various chapters of this thesis, for his inquisitive remarks (“Maar wat leer ik nu van zo’n metafoor?”) and for his willingness to discuss random issues, whether they concerned computer science or analog electrical circuitry.

The work presented in this thesis started in the “Programming Research Group” at the University of Amsterdam (UvA) and was finished in the “Interactive Software Development and Renovation” group at the Center for Mathematics and Computer Science (CWI). I would like to thank all colleagues that work or have worked in these groups for creating a friendly, open and stimulating environment to work in.

Outside the office, Miriam Egas and Daniel Dekkers showed the meaning of true friendship. They supported me in stressful times, made sure that I enjoyed the occasional rollercoaster and created something which feels like a second home in Eindhoven. Let’s go water-skiing soon. I am especially grateful to Daniel for his approval of the cover picture. It really means a lot to me.

I am very lucky to share my life with Ivonne. None of this would have been possible without her confidence, encouragement, patience and unconditional love, even at times when I stayed up way too late to fix some tiny detail. Far too often she has heard me mumble the dreaded words “nog heel even dit afmaken” (just gotta fix this).

Finally, I would like to thank my parents, Ton and Anny Moonen, for always being there when I needed them and for supporting me in my choices and my study. I guess they never expected that this would be the outcome of the maths challenge they gave me 18 years ago. It is to them that I dedicate this thesis.

Leon Moonen
Amsterdam, the Netherlands
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