Prof. Dr. Jasmin Blanchette
Dr. Martin Desharnais-Schäfer
Dr. Michael Kirsten
Elisabeth Lempa

Ludwig-Maximilians-Universität München
Institut für Informatik
Discussion on 07.01.2026
Homework due on 14.01.2026 at 16:00

Possible solution for Exercise Sheet 11 in

Scientific and Technical English for Computer Scientists

The exercise sheets consist of in-class exercises and homework. The in-class exercises take place during the second half of the lecture time slots. The homework, which is optional and ungraded, can be submitted via the "Homework" section in Moodle. The homework is subject to peer review.

Unless indicated otherwise, generative artificial intelligence assistants such as ChatGPT may be used, as long as you acknowledge how you use them as specified by the Institute's policy on plagiarism.[1] However, you may not use such tools to generate peer reviews for you. In addition, we strongly recommend that you do not use them to generate entire solutions, since that would defeat the purpose of the exercises.

Homework 11-3 ***Comparing Tables of Contents*** Compare the following tentative tables of contents for a bachelor's thesis with the title *A Learning Game for the Myhill–Nerode Theorem*. Select the one that you prefer, then answer the following questions about it:

- What does it do differently than the other two tables of contents?
- What are its advantages?
- Is there anything you would like to improve about it?

[1] `https://www.medien.ifi.lmu.de/lehre/Plagiate-IfI.pdf`

(1)

(2)

(3)

POSSIBLE SOLUTION:

Option (2) appears to be the most appropriate for a bachelor's thesis about an educational game project. While option (1) has a more nicely detailed background section, option (2) gives the most detail in the main section, where it matters. The section and subsections in option (2) are also the most descriptively named, and the "Implementation" and "Gameplay" sections have corresponding subsections that give some idea of the project's architecture. Option (3) follows the IMRaD (introduction, methods, results, and discussion) principle, which is very appropriate for empirical, study-based original research, but generally less suitable for a computer science thesis. Even though the Myhill–Nerode theorem and software benchmarking are both "methods" that were used in the development of the project, they were used in very different ways, and it does not make much sense to group them together.

Option (2) can be improved. First, it lacks a discussion section. The other two tables of contents suggest some initial performance issues that were resolved during development; this could be material for a discussion section. Second, option (2) could be improved by removing the Section 3 heading and promoting Subsections 3.1, 3.2, and 3.3 to be Sections 3, 4, and 5, so that they gain visibility.

Homework 11-4 ***Assessing Writing Advice*** Read "The Young Person's Guide to Writing Economic Theory"[2], available on Moodle, and describe its essence in an essay of about 300 words that answers the following questions:

- What are your main takeaways?
- Are there parts with which you disagree?
- What is specific to economic science and what also applies to computer science?

POSSIBLE SOLUTION:

Thomson gives recommendations along with both negative and positive examples of aspects to consider when writing a paper on economic theory for submission to an academic journal. He gives many detailed recommendations on structuring a paper, its sections, paragraphs, and even sentences, while paying particular attention to mathematical expressions, arguments, definitions, and proofs.

One of my takeaways is that we should pay attention to the balance between mathematical symbols and English prose, in particular when writing proofs. Another takeaway is what to expect from readers and what this means for structur-

[2]William Thomson, *Journal of Economic Literature* 37(1), pp. 157–183, 1999.

ing and writing a paper. It is both disappointing and encouraging that, according to Thomson, very few readers will invest enough time to understand my entire paper, but also that every small improvement in understandability helps along the way.

I agree with the vast majority of his recommendations but find that his writing at times contradicts them, as he integrates various aspects of sometimes obscure humor in footnotes and between the lines, which violates the principle of clarity. Moreover, the alternation of *he* and *she* is an imperfect way to achieve gender neutrality. I prefer to use singular or plural *they*, as seen in class. Some of the humor is dated: the baguette-carrying-Frenchman cliché and the claim that "your readers will think you need psychiatric help" are in bad taste, and providing a French quotation without a translation is discourteous. Furthermore, I am not convinced that Venn diagrams are useful for illustrating arguments in more complex theorems or proofs.

In general, I think that his arguments also apply to theory papers in computer science journals, but many of the examples are very specific to economic theory, and some effort is required to transfer them to computer science.