Working Group 1: Education

Review Michael Urban's 'An introduction to LaTeX'

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1 Compliments

To start with I like it, it is easy reading. A good style, no typos. Bravo! Because other people refer to this work and because TUG distributes it as number 9 in the TeXniques series—and therefore it might be considered as THE introduction to LaTeX—it seemed still appropriate for me to review it. As always with introductions the challenge is to tell only 'white' lies when telling the incomplete story.[1] So my review will have the structure of enumerating—with annotations—what is treated in the syllabus and what I would consider essential. Of course the latter is a matter of taste. I shall adopt the author's point of view '... introduce you to the LaTeX document preparation system ...' and discuss to what extend the author succeeded.

My comments and suggestions are about the February 86 version.

Some first impressions and overall remarks to start with. The syllabus does not contain exercises nor does it make use of simple diagrams to illustrate discussed items. An index is also missing.

2 Introduction

In the introduction the scope of the work '... introduce you to the LaTeX document preparation system and get you working with LaTeX as fast as possible' is stated. Disadvantages of word processor systems are enumerated

- not good at creating high-quality output with multiple fonts and sophisticated spacing,
- lack the power to do automatic sectioning, footnotes, tables of contents, cross-references and the like.[2]

Next the concept of style files is alluded to, and the power of LaTeX summarized. It is also mentioned that simple documents are simple to prepare, in spite of the non-WYSIWYG way of working.

2.1 What I missed

I missed a discussion of the relation between (descriptive) mark-up and formatting, along with LaTeX's place therein.

3 Getting started

The aim of this chapter: 'To produce your first LaTeX document,' is easily reached. The 'General Operation' discussion could have benefitted from a simple flow diagram to accompany the process stages as explained in the text. The typing vs. typesetting paragraph treats: quotation marks, dashes, ligatures, and line breaking.

4 Control sequences

Enough is told about the escape character, the control sequences and the control symbols in order to use these for mark up.[3]

5 Environments

In the \begin{...} and \end{...} environments (by the way what a horrible typesetted title), the text elements are: quote, quotation, verse, verbatim, center, flushright, flushleft, and list.

5.1 What I missed

I missed how to create basic paragraph shapes. A additional remark about how to handle special paragraph shapes, or a reference to the literature for it, does not harm.

6 Putting it together

Page mark-up and descriptive mark-up are treated pêle-mêle. The logical structure of chapters, sections etc. and the front matter (title, table of contents) and back matter (index and in general appendices) aspects are

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[1] And it is incomplete due to its conciseness: just 56 pages!

[2] Whether this is still the case or not I, the reviewer, consider LaTeX's capability to work on document *parts* with the possibility to do referencing to other parts, very powerful.

[3] I consider it right at this level not to mention how to create your own commands. The reader at this level is probably more familiar with his smart editor in order to reduce retyping of document elements.

discussed. How to number the front (and/or back) matter separately from the main document is touched upon.

6.1   What I missed

The template in section 5.6 is nice, but how to process the document in parts should have been discussed. Furthermore, no footers nor running heads are treated. Also how to create marginal notes or footnotes is missing.

7   Optional: tables and math

The author provides optional chapters about table and math typesetting. This means that these chapters are loosely coupled to the previous ones and could be skipped.

In the tables chapter the concept of floating document elements is explained. The way how extra vertical white space can be created in order to paste in document elements prepared by other tools, is insufficiently treated. In this way open space can be split over page boundaries. Inevitably the introduction to the mark up of tabular material is elementary. I personally would prefer to mark up framed tables in two steps. First the table, and next—separately, as a general tool—the framing, which could have been applied to any document element. This is a general approach. One can think of encadring of words, letters or even quotations (to mix the mark up of the rules with the mark up of the table is the rule rather than the exception).

The treatment of how to mark up of mathematical material is understandably very elementary. For practical situations I consider this insufficient, especially with respect to aligned equations.[4]

7.1   What I missed

What I missed, especially in the math chapter, is a discussion of how math should appear in print, independently of the tool used. Mention Swanson at least.

The (La)TEX way is taken for granted, but that is not enough due to the various ways formulas can be marked up.

8   Cross-referencing

Just enough is told in order to use symbolic referencing. It is not explained how to refer to items in the list of references.

9   Error messages

The last chapter deals with how to read, understand and cope with error messages; 7 pages! The author could not get around treating the box and the glue concepts, in order to explain the overfull and underfull messages. These concepts are fundamental however and should have been treated earlier, and not hidden in the error messages chapter.

10   Conclusion

It is pleasant reading—I found no typos! As a first introduction to the *use* of LᴬTEX—*as is*, by examples—it is good and well-written. However, after reading this syllabus an author is not capable of marking up his journal article or technical report via LᴬTEX. It is a *real* introduction. A list of (annotated) references for further reading would have served the reader. Exercises to accompany the first hands-on experience had to be added, along with their answers. Experience from the TEXbook has it that readers start from these answers as templates for similar situations.

References

[1] Urban, M. (1986): An introduction to LᴬTEX (to order from the TUG office).

[2] Swanson, E. (1986): Mathematics into Type, AMS.

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[4]Personally, I don't like examples completely alienated from their original meaning. The example of δ_{ij} is offensive. Why had the example given at page 49 of Lamport's manual to be altered? If the Kronecker delta had to be introduced do it in the correct way.