

Notes from Knuth's T_EXbook

"I can't go to a restaurant and order food because I keep looking at the fonts on the menu. - DK

1.1 - After you have mastered the material in this book, what will you be: A T_EXpert, or a T_EXnician?

I will be the very best T_EXnician, like no one ever was.

2.1 - Explain how to type the following sentence to T_EX: Alice said, "I always use an en-dash instead of a hyphen when specifying page numbers like '480–491' in a bibliography."

Alice said, "I always use an en-dash instead of a hyphen when specifying page numbers like '480--491' in a bibliography."

2.2 - What do you think happens when you type four hyphens in a row?

My guess is one em-dash and a hyphen. Let's see: —

2.3 - Think of an English word that contains two ligatures.

A *ligature* is a combination of letters that are treated as one unit so the word looks better. Two examples would be kerfuffle and filament.

2.4 - Ok, now you know how to produce " ' and ' "; how do you get " “ and “ ?

`\lq\lq\thinspace\lq\` and `\lq\thinspace\lq\lq`

2.5 - Why do you think the author introduced the control sequence `\thinspace` to solve the adjacent-quotes problem, instead of recommending the trickier construction `'$,,$'` (which also works)?

Utilizing math mode in this case would be unnecessary.

3.1 - What are the control sequences in `'\I'm \exercise3.1\!'`?

`\I`, `\exercise`, and `\!`

3.2 - We've seen that the input `P\`olya` yields 'Pólya'. Can you guess how the words 'mathématique' and 'centimètre' should be specified?

`math\`ematique` and `centim\`etre`

3.3 - Which of the control sequences `_` and `\(return)` is primitive?

`\(return)` is primitive because T_EX treats this the same as control space.

4.1 - Explain how to type the bibliographic reference 'Ulrich Dieter, *Journal für die reine und angewandte Mathematik* **201** (1959), 37–79.' [Use grouping.]

`'Ulrich Dieter, {\sl Journal f"ur die reine und angewandte Mathematik 201 (1959), 37–79.'`

4.2 - Explain how to typeset a roman word in the midst of an italicized sentence.

Use grouping.

4.4 - Why do you think the author chose the names `'\tenpoint'` and `'\tenrm'`, etc., instead of `'\10point'` and `'10rm'`?

You can't use numbers in control sequences.

4.5 - Suppose that you have typed a manuscript using slanted type for emphasis, but your editor suddenly tells you to change all the slanted to italic. What's an easy way to do this?

```
\renewcommand{\sl}{\it}
```

Possibly not the best way to do this, but the simplest. Since `\sl` is already defined, we just redefine it to italics with `\renewcommand`.

5.1 - Sometimes you run into a rare word like 'shelfful' that looks better as 'shelfful' without the 'ff' ligature. How can you fool T_EX into thinking that there aren't two consecutive f's in such a word?

```
shelf{f}ul
```

5.2 - Explain how to get three blank spaces in a row without using `_`.

```
{ { { } }
```

5.3 - What do you think happens if you type the following:

```
\centerline{This information should be {centered}.}
\centerline So should this.
```

The first sentence will be centered, but only the 'S' in the second will be centered.

This information should be centered.

S

o should this.

5.4 - How about this one?

```
\centerline{This information should be \it centered.}
```

Centered with 'centered' in italics.

This information should be *centered*.

5.5 - Define a control sequence `\ital` so that a user could type `'\ital{text}'`

```
\newcommand{\ital}[1]{\it #1}\}
\ital{nice nice nicf} what \
{\it nice nice nicf} what
```

6.1 Exercise 6.1 - Statistics show that only 7.43 of 10 people who read this manual actually type the `story.tex` file as recommended, but that those people learn T_EXbest. So why don't you join them?

A SHORT STORY

by A. U. Thor

Once upon a time, in a distant galaxy called Ööç, there lived a computer named R. J. Drofnats.

Mr. Drofnats—or "R. J.," as he preferred to be called—was happiest when he was at work typesetting beautiful documents.

Exercise 6.2 - Look closely at the output of Experiment 2, and compare it to `story.tex`: If you followed the instructions carefully, you will notice a typographical error. What is it, and why did it sneak in? Typed the whole thing on one line so no error :)