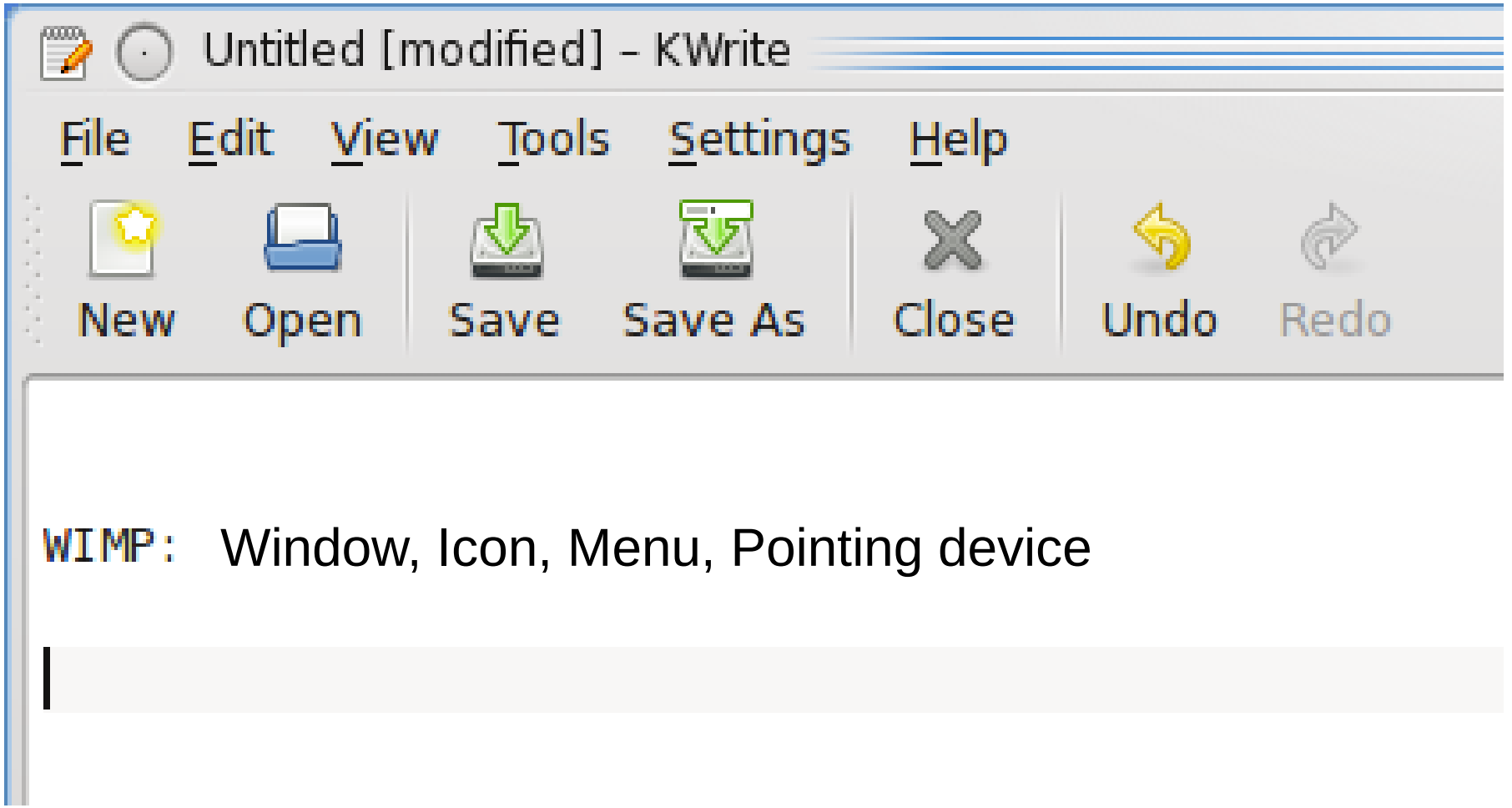
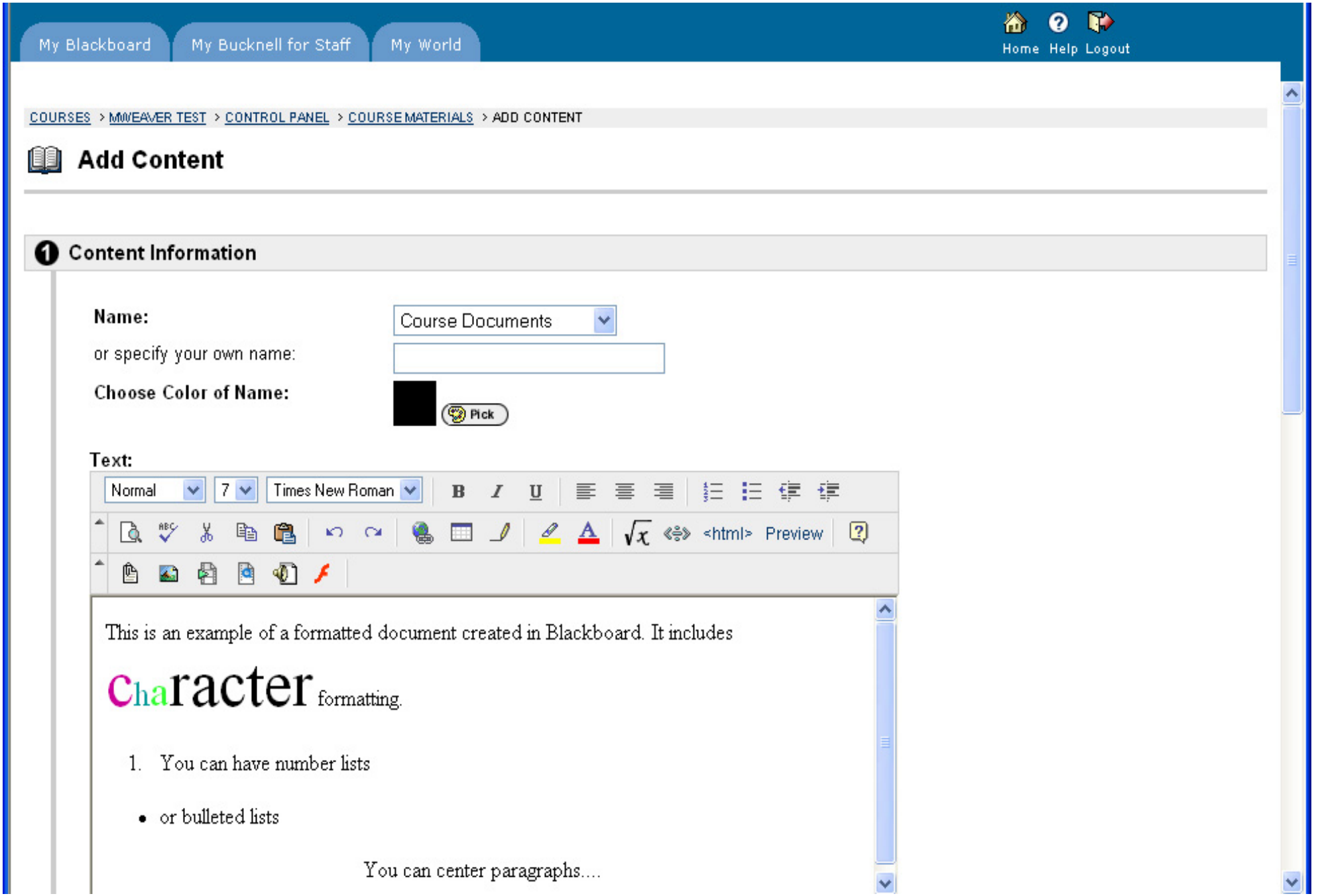
Text Editors … and “vi” in particular

Hans Vangheluwe

Text Editors ...



WYSIWYG (or not quite ...)



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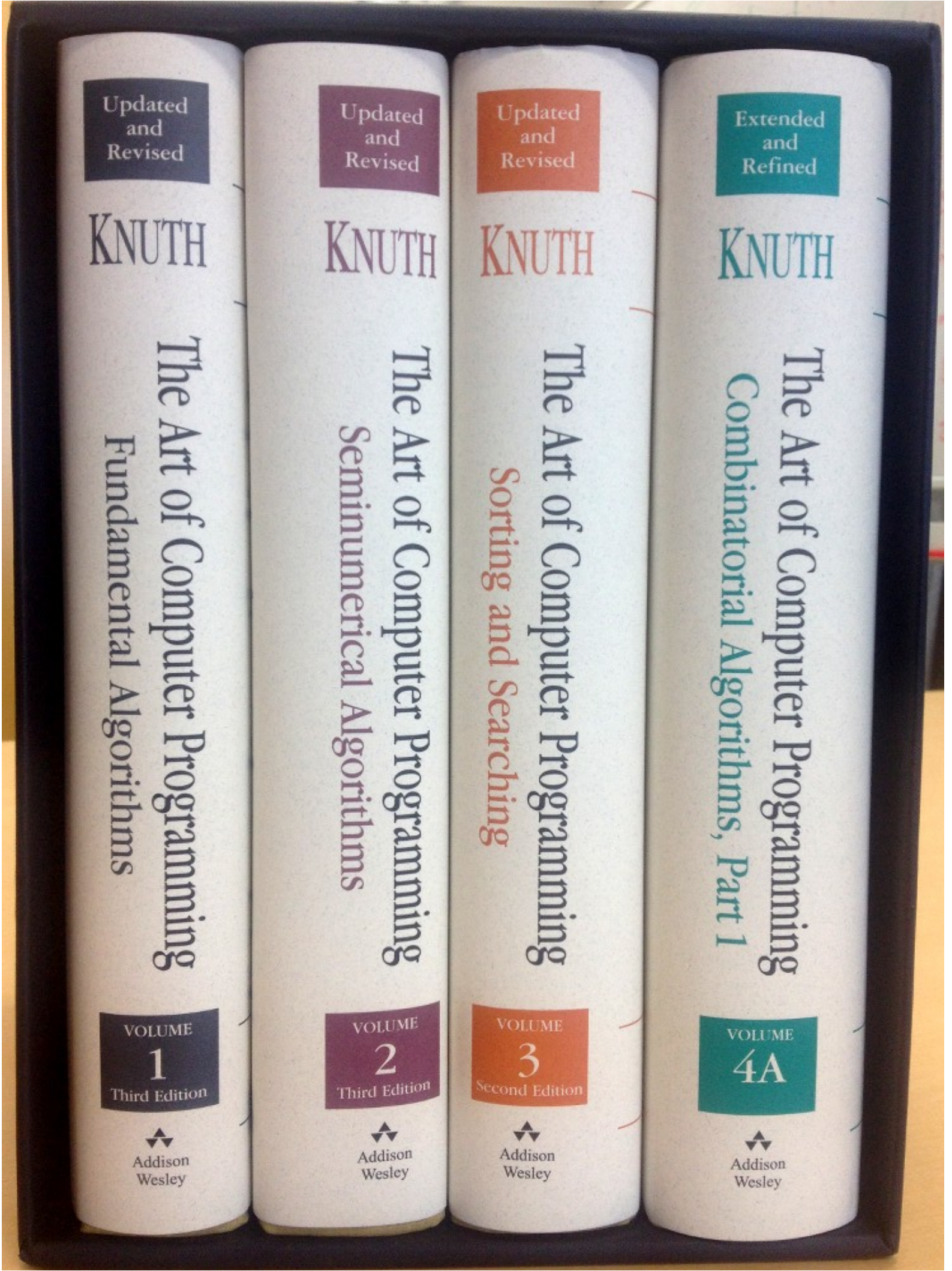
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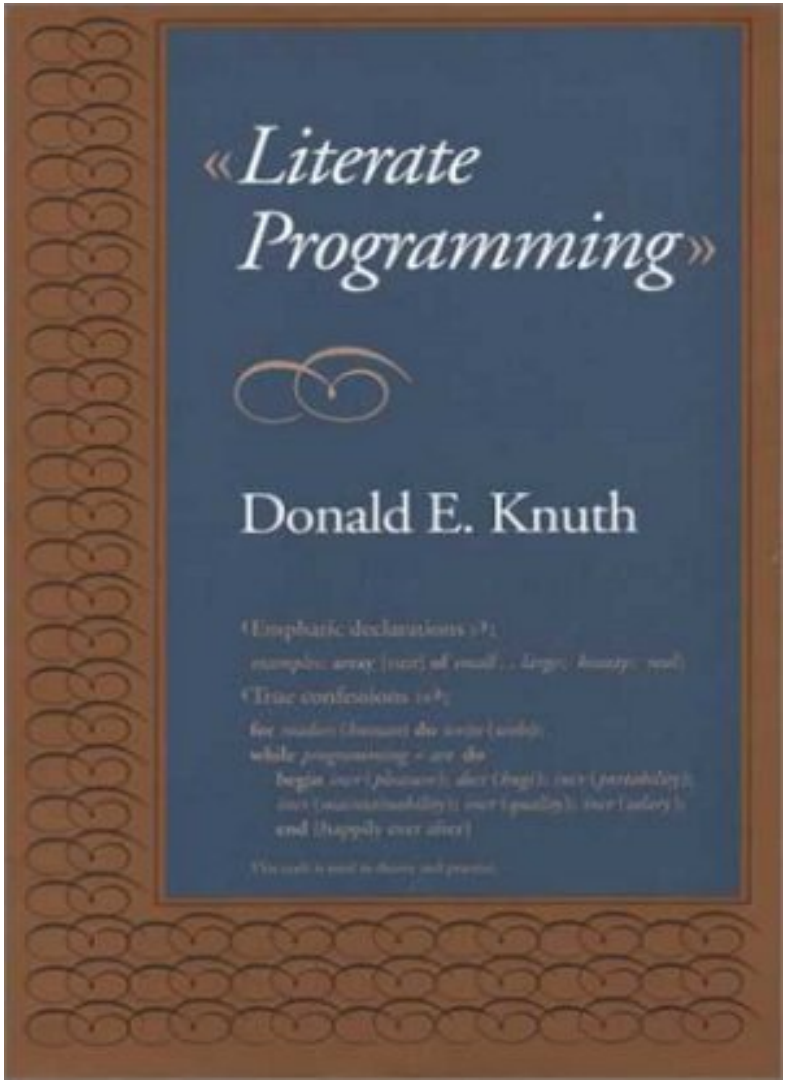
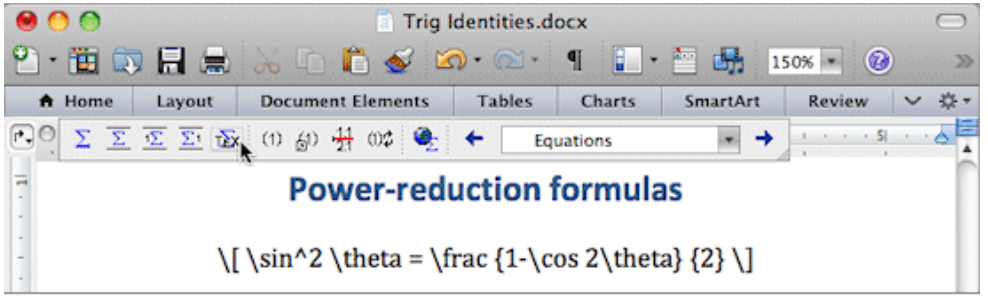
Explicitly state the **thoughts** behind the program:

- **Explain** the link between requirements (what) and design (how)
- **Explain** design decisions (algorithms and data structures)
- **Explain** code-level decisions (for example, for efficiency)

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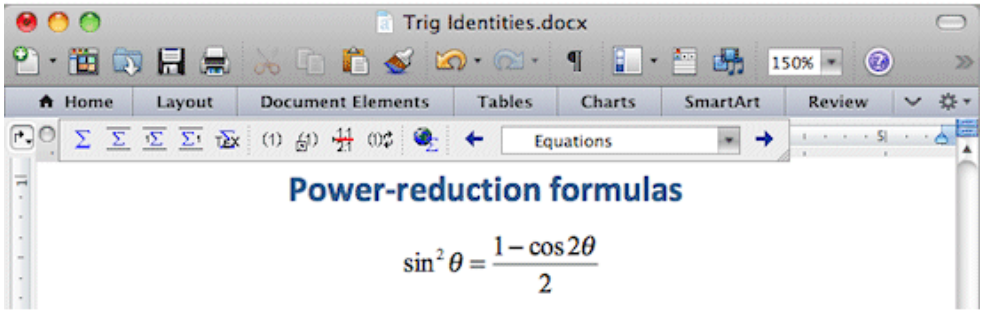
Power-reduction formulas
\[\sin^2 \theta = \frac {1-\cos 2\theta} {2} \]

becomes...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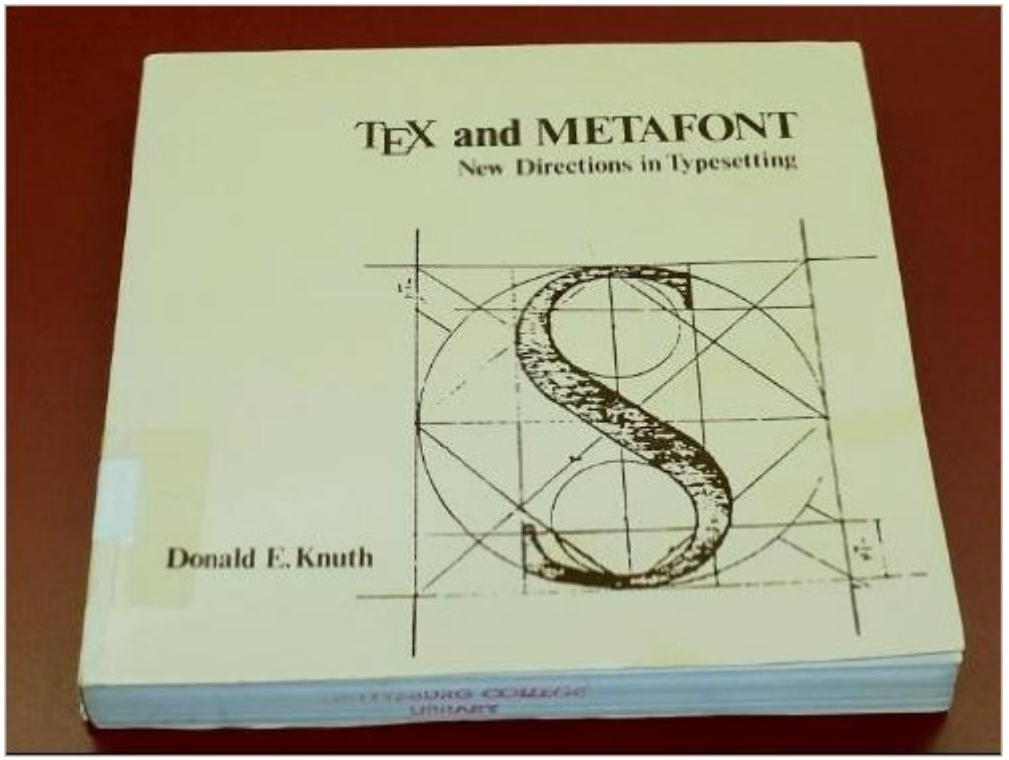
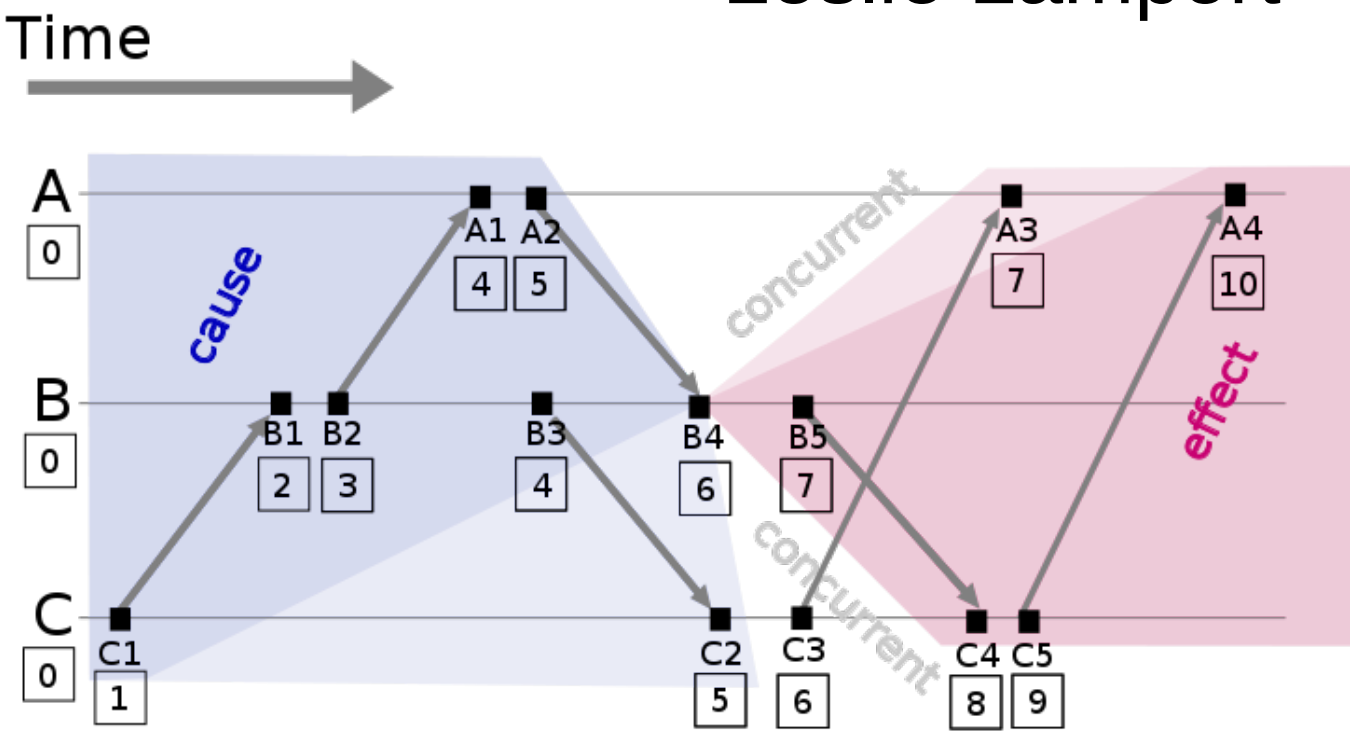
$\sin^2\theta = \frac{1-\cos 2\theta}{2}$

TEX


TEX and METAFONT
New Directions in Typesetting
Donald E. Knuth

Leslie Lamport



LaTeX

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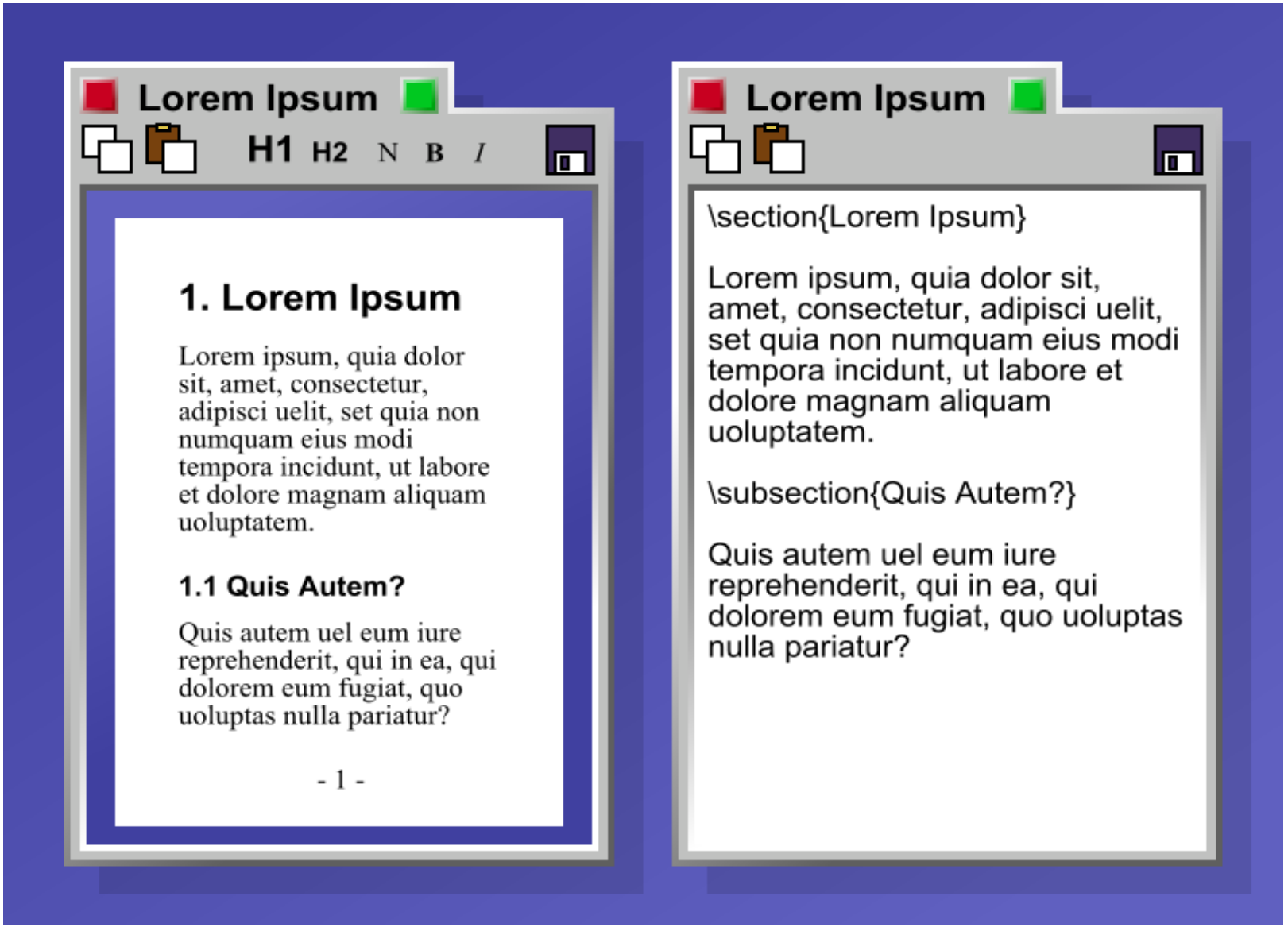
2013

Non-WYSIWYG ...

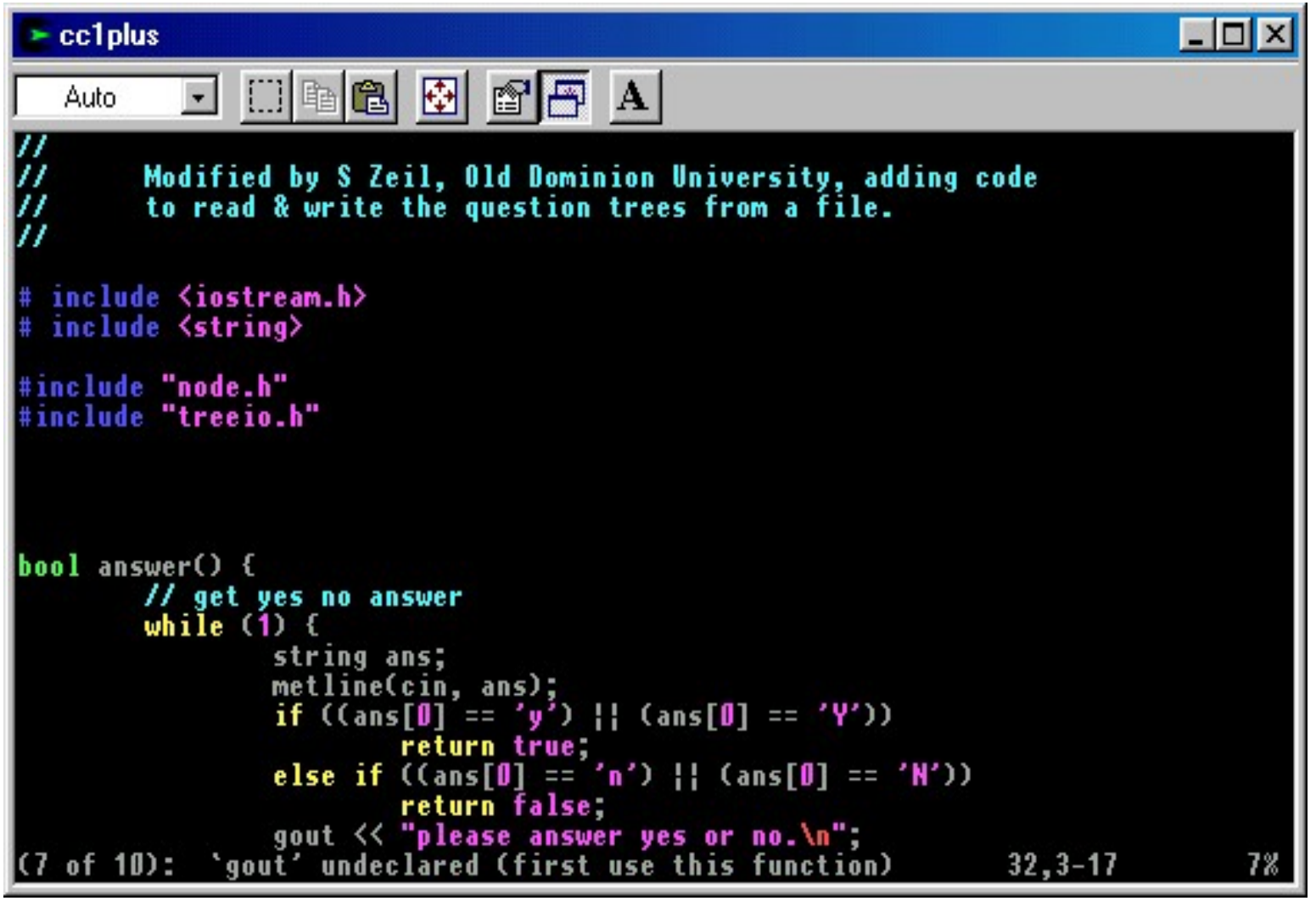
but optimal “typesetter”

LaTeX

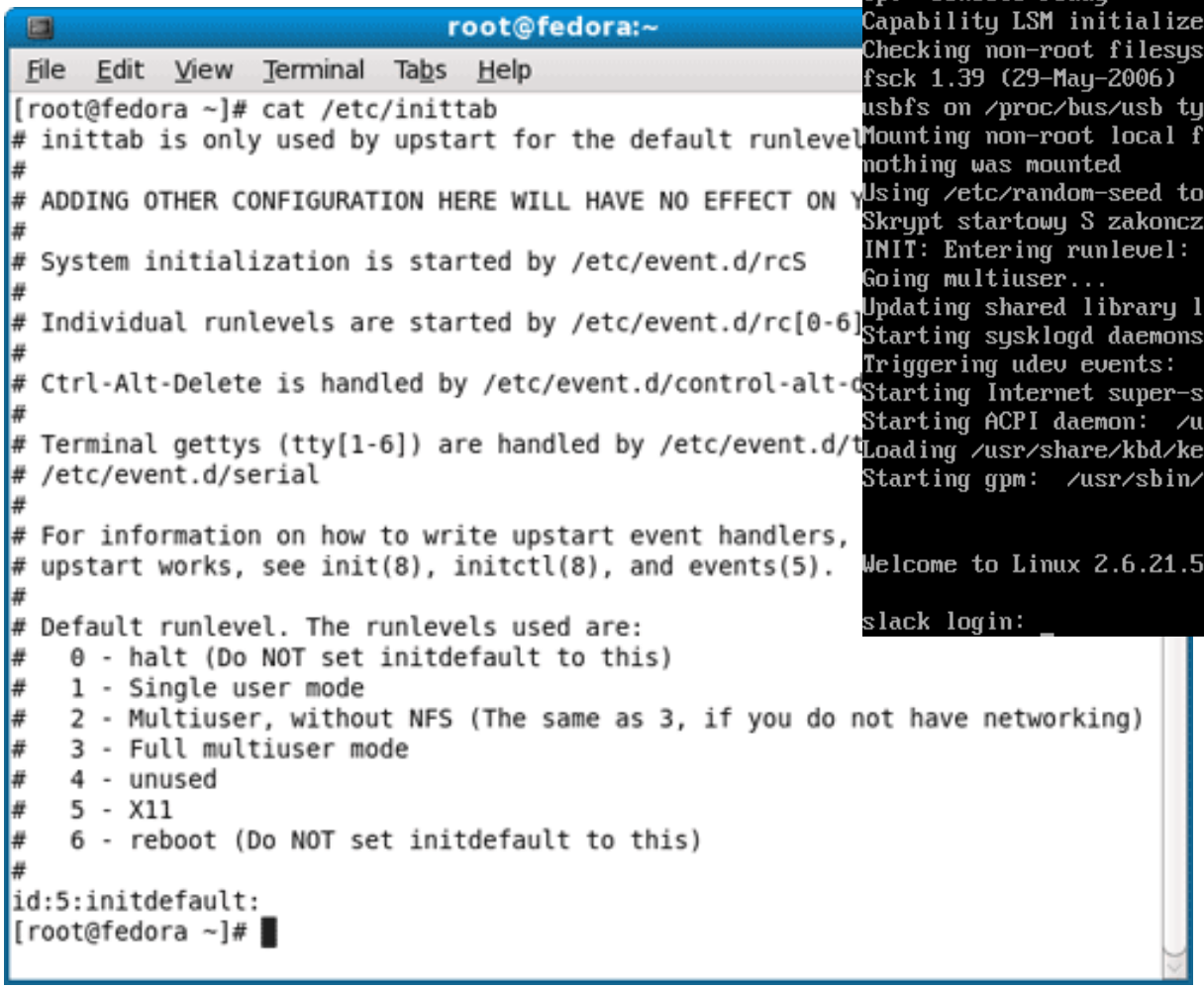


Who needs a mouse anyway ... “space cadet” keyboard

Who needs a mouse anyway ... the **vi** editor (and variants ... vim)



Who needs a mouse anyway ... the **vi** editor



use in minimal environments, ubiquitous

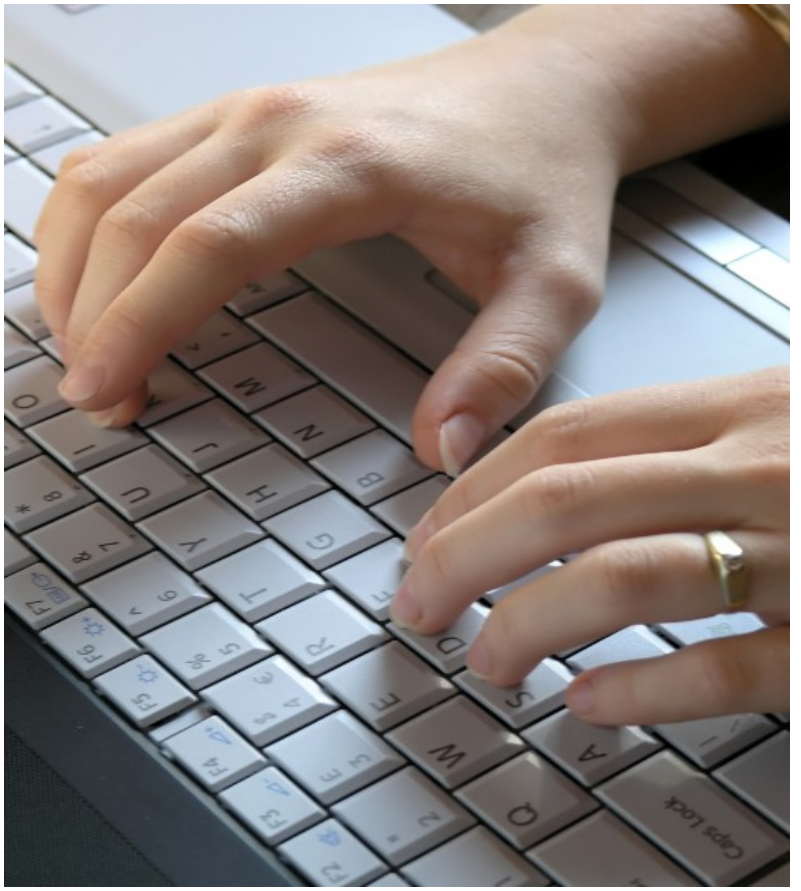
Who needs a mouse anyway ...
the **vi** editor (based on **ex** line editor)

Two **modes**:

- **C**ommand
- **I**nsert

Keyboard only!

... **fast** ...



vi help sheet

some usefull tips and command for the vi editor — *version of 29th Oct. 2006*

You have to use ESC (escape key) to get into the vi command mode. You will need to press RETURN Key for executing a command starting with the ponctuation character « : » or « / » or « ? ». Use CTRL+c for cancel a command. Use « . » for repeat your last command and « :!cmd » for execute a shell command (where cmd is the command to execute).

to get into insert mode

i	insert text before the cursor
a	append text after the cursor
I	insert text at the beginning of the current line
A	append text at the end of the current line
o	insert text in a new line below the cursor
O	insert text in a new line below the cursor

navigation commands

h or ←	move cursor left
l or →	move cursor right
k or ↑	move cursor up
j or ↓	move cursor down
G	goto the end of file
nG or **:n**	goto the line number « n »
0	move to the beginning of line
$	move to the end of line
ctrl+f	move one screen forward
ctrl+b	move one screen backward

file commands

:q	quit current open file
:q!	force to quit (without saving open file)
:w	save file
:w file	save file as « name »
:wq!	overwrite file then quit
:x,yw file	write from line « x » to line « y » into « file »
:w >> file	append buffer to « file »
:e file	edit another file
:e! file	edit another file without saving the current open file
:r file	insert file content at the current cursor position
:n	edit next file in vi arguments file list
ctrl+G	get file status

You can launch vi with some arguments. One usefull is « -c » for execute vi commands in a file directly from the command line.

ex.:
vi -c « %s/false/true/g\|wq » file.txt

search commands

/string	search forward for « string »
?string	search backward for « string »
n	repeat last search
:,$s/str1/str2/gc	search and replace « str1 » by « str2 » from the current line (a line number can be specified before the comma) to the end of file. Ask for confirmation before replace.
:%s/str1/str2/g	replace all « str1 » by « str2 » in all the file without confirmation.
:%s/str1/str2/	replace « str1 » by « str2 » for first occurrence of each line of file.

edit commands

r	replace a character at the cursor position
u	undo last change
mA	set mark « A » (can be any letter, case sensitive) at the beginning of current line
y'A	yank from current line to the mark « A »
d'A	delete from current line to the mark « A »
P (caps P)	put the buffer before the cursor
p (small p)	put the buffer after the cursor
x	delete character at cursor position
dw	delete first word after cursor position
d$ or **D**	delete from cursor position to the end of line
dd	delete curent line
J (caps J)	join curent line with the following line

Look at :

:map for mapping a key in command mode to a group of commands (ex. **:map de :,$d^M** will delete all file when using **de** command)
:set for define or show your editor current options
:ab for define a text abreviation in insert mode (ex. **:ab VIM Vi Improved** will auto complete **VIM** in insert mode)