

Groff cheatsheet

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1. Introduction

Groff is a minimalistic text editor. Something like latex/markdown. As far as I know, it exists preinstalled in most Linux distributions. Why not use docs/markdown/latex? You could. But this is pretty easy for most things. Especially if you quickly need to create a text based PDF document with formatting and everything but you don't want to think too much.

2. This cheatsheet?

This was also made using groff.

I will aim to go through the documentation and list down some things I find useful here. Note that this is not extensive by any means. If you want a super extensive list just refer to **man 7 groff** on your terminal.

3. Setup

1. Firstly check if groff is installed by going to the terminal and typing 'man groff'
2. Then create a file with an extension of .ms if you dont have tables in your document. Or .me if you do.
3. To compile the document into a PDF file we need to run the command 'groff -ms temp.ms -Tpdf > temp.pdf'.

Note that we pipe it because groff outputs to terminal otherwise.

4. If you are using vim, you can automate this saving bit very easily.

Just go to your ~/.vimrc file and add these lines.

```
au BufWritePost,BufFilePost *.ms !groff -ms % -T pdf > %:r.pdf
```

```
au BufWritePost,BufFilePost *.me !tbl % | groff -me -T pdf > %:r.pdf
```

5. How to write them in the file?
Add them like this:

```
.TL  
This is the title  
.LP  
Hello world
```

6. You can then open the .pdf with whatever you use. (I use zathura).

4. Basics

4.1. Title

This will create a title. Like this document
.TL

4.2. Author

This will add an author.
.AU

4.3. Indented Paragraph

This create an indent with a number . at the start. Like this list.
.IP 1.

4.4. Headers

This creates the next heading and autonumbers it. The number after it determines level. eg. 1 for something like 1.0, 2.0 and 2 for something like 1.1, 2.1 etc
.NH 1

4.5. Indented List

If you have a list you want to indent.
.RS
.IP 1.
.IP 2.
.RE

4.6. Convert to bold.

If you want to convert to **bold**.
.B
hello

4.7. Convert to *italic*.

If you want to convert to italic.
.I
hello

4.8. Add underline.

If you want to add underlines.
.UL "Underlined"

4.9. Comments

This adds a comment to a line
\ "comment"

4.10. Boxes

Add box around text.

```
.B1  
hello  
.B2
```

4.11. Page break

This creates a page break.

```
.bp
```

4.12. Add images

Adds images. (Note: only accepts .eps files. So convert it using imageMagick. Eg: convert temp.jpg temp.eps)



```
.PSPIC -L "house.eps"
```

To make things go faster you can use this command in your vimrc

```
groff -e -ms % -Tps > %:r.ps && ps2pdf %:r.ps %:r.pdf
```

4.13. Table of contents!

```
.XS 1  
heading  
.XA 2  
heading 2  
.XE  
  
.TC  
.bp
```

5. Equations

$$y = 3x + 1000$$

This adds any kind of equations.

```
.EQ
y = 3x + 1000
.EN
.LP
```

5.1. Add super/subscript

$$y = 3^{\phi+100}$$

This adds superscripts/subscripts. To write greek write the name of the letter.

```
.EQ
y = 3 sup{ phi + 100}  "\or sub for subscript
.EN
.LP
```

5.2. To add a division type thing.

$$y = \frac{1 + \sqrt{5}}{2 + x}$$

```
.EQ
y = { 1 + sqrt 5 } over { 2+x }
.EN
```

5.3. To add sum over.

$$y = \sqrt{\frac{\sum_{i=1}^N (x_i - \bar{x})^2}{x - 1}}$$

```
.EQ
y = sqrt {
{sum from i=1 to N (x sub i - x bar ) sup 2}
over {x-1}
.EN
```

5.4. To add integral

$$\pi = \int_{-1}^1 \frac{dx}{\sqrt{1-x^2}}$$

```
.EQ
pi = int from -1 to 1 dx over sqrt { 1-x sup 2 }
.EN
```

5.5. To add text replacement shortcuts.

$$2 * b^2 - 4ac$$

$$3 * b^2 - 4ac$$

5.6. Inline equations

This is a text where I can add $3\alpha + 10\beta = 4p$

.EQ

delim

.EN

.PP

This $3\alpha + 10\beta = 4p$