

# A Sample Groff Document

by  
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## Introduction

Groff is an easy to use program for typesetting and the creation of documents which can be controlled by several macros. In this document I will use the *mom* macro set. In a typical Linux installation its documentation is installed at the following location.

```
/usr/share/doc/groff-base/html/mom/toc.html
```

If you are unsure look into the last paragraphs of the man page of *groff*.

This document can be generated with the following command:

```
pdfmom -e -t -k groff.mom > document.pdf.
```

The options `-e` and `-t` are used for preprocessing mathematical equations and table respectively. The `-k` option allows for using german umlauts and will convert UTF8 encoded files to something that groff understands.

Look into the `groff.mom` file to get information about the structure of a groff document. The generated PDF on the other hand gives an impression of the generated document.

## Basic Formatting

Words can be formatted in **bold** or *italic* by the inline macro `\f`.

To create external links one can use the `PDF_WWW_LINK` macro that comes with `pdfmom`: <https://www.example.com>

A link with a [different name](#) can be used as well.

## Lists

Lists can easily be created using the `LIST` and `ITEM` macro.

- First item
- Second item

Now a list with numbers:

1. First item
2. Second item

## Images

Images can be inserted if they are available as PDF documents. JPEG and PNG images can be converted with *ImageMagick*: `convert image.jpg image.pdf`

After that the image can be inserted with `PDF_IMAGE` macro. The dimension of the PDF must be given as parameter. It can be extracted from the PDF with `pdfinfo`.



**An avatar of me.**

## Tables

There is support for tables using the `tbl` preprocessor and the `.TS` and `.TE` macros. Each table must contain options (which are optional), formatting information and data.

To enable table preprocessing the `-t` option must be given to the `pdfmom` command.

x	$f(x)=x^2$	$g(x)=x^3$
1	1	1
2	4	8
3	9	81

It is generally a good idea to put tables in `FLOAT` environments.

## Equations

Mathematical equations can be created with the `eqn` pre-processor, which must be

enabled during document generation with the `-e` option. Then you can use the `EQ` and `EN` macros.

$$x^2 = \frac{1 + \pi}{\sqrt{x}}$$

## German Umlauts

German umlauts can be specified using a special notation `ä Ä ü Ü ö Ö ß`. Once you understand it it can easily be remembered. The `man` page of `groff_char` will list the names of further symbols.

If the document is saved with ISO-8859-1 encoding umlauts can be entered directly: `ö ä ü ...`

Another way to solve encoding problems and to support UTF8 encoding is the `-k` option. In this case the `preconv` tool is run before which will convert files to encodings that `groff` understands.

## Further Information

Information about `groff` in general (e.g. the *Troff User's Manual*) and detailed documentation about the `tbl` and `eqn` pre-processors is available at the following URL  
<http://www.kohala.com/start/troff/troff.html>.