## **Contents**

1	Gro	ff Cheatsheet	1
	1.1	Compile	1
	1.2	Comments	1
	1.3	Title	2
	1.4	Page styling	2
	1.5	Headings	3
		1.5.1 Numbered / Ordered headings	3
		1.5.2 Unordered headings	4
	1.6	Paragraphs	4
		1.6.1 No-line indented	4
		1.6.2 First-line indented	5
		1.6.3 All-but-first-line indented	5
		1.6.4 All-indented paragraph	5
		1.6.5 Range All-indented paragraph	6
	1.7	Quote	6
		1.7.1 Paragraph	6
		1.7.2 Specific range	6
	1.8	Text formatting	7
		1.8.1 By macro	7
		1.8.2 Font Type / Format Text	8
	1.9	test	9

# 1 Groff Cheatsheet

Groff (GNU troff) is a typesetting system that reads plain text mixed with formatting commands and produces formatted output. Output may be PostScript, PDF, html, or ASCII/UTF8 for display at the terminal. Formatting commands may be either low-level typesetting requests ("primitives") or macros from a supplied set. Users may also write their own macros. All three may be combined.

Present on most Unix systems owing to its long association with Unix manuals (manpages), groff is capable of producing typographically sophisticated documents while consuming only minimal system resources.

Groff is released under the GNU General Public License.

# 1.1 Compile

We need to compile our document into ps (PostScript) or pdf (Portable Document Format) formats which will be done by redirection:

Decription	Command
ps format (Default)	<pre>\$ groff -ms file.ms &gt; output.ps</pre>
pdf format	<pre>\$ groff -ms -Tpdf file.ms &gt; output.pdf</pre>
We also can compile with -mspdf flag to have some extra	<pre>\$ groff -mspdf -Tpdf file.ms &gt; output.pdf</pre>
features like <i>Table of Contents</i> :	

### 1.2 Comments

groff has three way to create a comment:

```
1 \" This is a comment
2 .\" Also a comment but, it has to be at the beginning of the line
3 .ig
4 This is a multiline comment
5 everything in this block will be ignored.
6 ...
```

## 1.3 Title

Every document (in general, not only in groff) at least needs a title and author:

```
1 .TL
2 The Title
3 .AU
4 The Author
```

We can add institution:

```
1 .AI
2 Home
```

We can also have abstraction:

```
1 .AB
2 This is an abstraction
3 .AE
```

```
The Title

The Author

Home

ABSTRACT

This is an abstraction
```

Figure 1: Title, Author, Institution and Abstraction

To have an abstraction without the *abstraction* keyword, simple give .AB the no argument:

```
1 .AB no
2 This is an abstraction
3 .AE
```

# 1.4 Page styling

We can have page footer and header:

```
.ds RH Top right
.ds CH Top middle \" reserved for page number
.ds LH Top left
.ds RF Buttom right
.ds CF Buttom middle \" reserved for current date (.DA)
.ds LF Buttom left
```

```
Top left -2- Top right

1. Heading 1

A Simple paragraph
```

Figure 2: Page Headers



Figure 3: Page Footers

Change font size:

```
ı .nr PS 18
```

# 1.5 Headings

- Ordered / Numbered
- Unordered

## 1.5.1 Numbered / Ordered headings

```
1 .NH 1
2 Heading level 1
3 .NH 2
4 Heading level 2
5 .NH 3
6 Heading level 3
7 .NH 4
8 Heading level 4
9 .NH 5
10 Heading level 5
11 .NH 6
12 Heading level 6
```

The .NH macro without any arguments (levels) is level 1 by default.

```
1. Heading level 1
1.1. Heading level 2
1.1.1. Heading level 3
1.1.1.1. Heading level 4
1.1.1.1. Heading level 5
1.1.1.1.1. Heading level 6
```

Figure 4: Numbered Headings

## 1.5.2 Unordered headings

```
1 .SH
2 A Simple heading
3 .SH 2
4 A Simple heading
```

A Simple heading

A Simple heading

Figure 5: Unordered Headings

# 1.6 Paragraphs

### 1.6.1 No-line indented

```
    LP
    This is a simple paragraph. This is a simple paragraph. This is a simple paragraph.
    This is a simple paragraph. This is a simple paragraph.
```

### **Paragraphs**

This is a simple paragraph. This is a simple paragraph.

Figure 6: No-Line Indented Paragraph

### 1.6.2 First-line indented

```
1 .PP
2 This is a simple paragraph. This is a simple paragraph.
```

#### **Paragraphs**

This is a simple paragraph. This is a simple paragraph.

Figure 7: First-line Indented Paragraph

#### 1.6.3 All-but-first-line indented

```
    .XP
    This is a simple paragraph. This is a simple paragraph.
    This is a simple paragraph. This is a simple paragraph.
```

#### **Paragraphs**

This is a simple paragraph. This is a simple paragraph.

Figure 8: All-But-First-Line Indented Paragraph

### 1.6.4 All-indented paragraph

```
1 .NH
2 Indented Paragraph
3 .IP
4 This is a indented paragraph. This is a indented paragraph.
5 This is a indented paragraph. This is a indented paragraph.
6 .LP
7 This is a regular paragraph. This is a regular paragraph.
8 This is a regular paragraph. This is a regular paragraph.
```

#### 1. Indented Paragraph

This is a indented paragraph. This is a indented paragraph.

This is a regular paragraph. This is a regular paragraph. This is a regular paragraph. This is a regular paragraph. This is a regular paragraph.

Figure 9: Range-Specific Indented Paragraph

## 1.6.5 Range All-indented paragraph

```
1 .NH
2 Range-indented Paragraph
3 .LP
4 This is a regular paragraph. This is a regular paragraph.
5 This is a regular paragraph. This is a regular paragraph.
6 .RS
7 This is a quote from X. This is a quote from X. This is a quote from X.
8 This is a quote from X. This is a quote from X.
9 .RE
```

#### 2. Range-indented Paragraph

This is a regular paragraph. This is a regular paragraph.

This is a quote from X. This is a quote from X.

Figure 10: All Indented Paragraph

## 1.7 Quote

## 1.7.1 Paragraph

```
1 .NH
2 Quote Paragraph
3 .QP
4 This is a quoted paragraph. This is a quoted paragraph. This is a quoted paragraph.
5 This is a quoted paragraph. This is a quoted paragraph. This is a quoted paragraph.
6 .LP
7 This is a regular paragraph. This is a regular paragraph. This is a regular paragraph.
8 This is a regular paragraph. This is a regular paragraph. This is a regular paragraph.
```

### 1. Quote Paragraph

This is a quoted paragraph. This is a quoted paragraph.

This is a regular paragraph. This is a regular paragraph. This is a regular paragraph. This is a regular paragraph. This is a regular paragraph.

Figure 11: Quote Paragraph

## 1.7.2 Specific range

```
    .NH
    Quote Range
    .QS
```

```
This is a quoted paragraph. This is a quoted paragraph. This is a quoted paragraph.

This is a quoted paragraph. This is a quoted paragraph. This is a quoted paragraph.

LP

This is a regular paragraph. This is a regular paragraph. This is a regular paragraph.

This is a regular paragraph. This is a regular paragraph. This is a regular paragraph.
```

#### 2. Quote Range

This is a quoted paragraph. This is a quoted paragraph.

This is a regular paragraph. This is a regular paragraph. This is a regular paragraph. This is a regular paragraph. This is a regular paragraph.

Figure 12: Quote Range

## 1.8 Text formatting

## 1.8.1 By macro

## 1.8.1.1 Italic

```
1 .I
2 This is Italic text.
```

#### 1.8.1.2 Bold

```
1 .B
2 This is Bold text.
```

#### 1.8.1.3 Bold-Italic

```
.BI
2 This is Bold-Italic text.
```

### 1.8.1.4 Monospace

```
CW
This is a monospace text.
```

Using macros like this, will change the style of the text from the calling macro, until next macro. And they cannot take argument. But there is an alternative way which will effect only on a specific strings:

```
1 .I "This is a Italic text."
2 .B "This is a Bold text."
3 .BI "This is a Bold-Italic text."
4 .CW "This is a monospace text."
```

**1.8.1.5 Macros argument(s)** First argument is the string. Second argument is a character to append in the *EOL*. And the third argument is a character to be inserted in the *BOL*. These characters will not be effected by the macros.

#### 1. Text formatting

.I "Are you kidding right now" ?

This is Italic text. This is Bold text. This is Bold-Italic text. This is a monospace text.

Figure 13: Bold, Italic, Bold-Italic and Monospace text

```
2
3 .CW "Inside a pair of brackets" ] [

1. Text formatting
Are you kidding right now?

[Inside a pair of brackets]
```

Figure 14: Arguments of Forammtings Macros

## 1.8.2 Font Type / Format Text

This way, we can specify the beginning and ending of the formatting.

```
.LP
   Testing
   .ft B
  This is a very and multi-line Bold text. This is kinda an environment.
   This is a very and multi-line Bold text. This is kinda an environment.
   This is a very and multi-line Bold text. This is kinda an environment.
   .ft P
   .ft I
  This is a very and multi-line Italic text. This is kinda an environment.
   This is a very and multi-line Italic text. This is kinda an environment.
   This is a very and multi-line Italic text. This is kinda an environment.
   .ft P
   .ft BI
  This is a very and multi-line Bold-Italic text. This is kinda an environment.
  This is a very and multi-line Bold-Italic text. This is kinda an environment.
   This is a very and multi-line Bold-Italic text. This is kinda an environment.
   .ft P
20
   .ft CW
23 This is a very and multi-line Monospace text. This is kinda an environment.
24 This is a very and multi-line Monospace text. This is kinda an environment.
   This is a very and multi-line Monospace text. This is kinda an environment.
   .ft P
```

```
Testing Testin
```

### 1. Text formatting

Testing

This is a very and multi-line Bold text. This is kinda an environment.

This is a very and multi-line Italic text. This is kinda an environment. This is a very and multi-line Italic text. This is kinda an environment.

This is a very and multi-line Bold-Italic text. This is kinda an environment. This is a very and multi-line Bold-Italic text. This is kinda an environment.

This is a very and multi-line Monospace text. This is kinda an environment. This is a very and multi-line Monospace text. This is kinda an environment.

Testing Testing Testing Testing Testing Testing Testing Testing.

Figure 15: Format-Text

## 1.9 test