1 Terminal

1.1 Introduction

```
> uname -mns
  Darwin imac.local i386
  Report bugs to <bug-coreutils@gnu.org>.
> uname -mns
  Darwin mbkp.local i386
> ssh anker.unibe.ch
  user@bender.unibe.ch's password:
> uname
  Linux
> uname -mon
  bender x86_64 GNU/Linux
> uname --help
  Usage: uname [OPTION]...
  Print certain system information. With no OPTION, same as -s.

    -a, --all print all information, in the following order,
                            except omit -p and -i if unknown:
    -s, --kernel-name print the kernel name
    -n, --nodename print the network node hostname
    -r, --kernel-release print the kernel release
    -v, --kernel-version print the kernel version
    -m, --machine print the machine hardware name
    -p, --processor print the processor type or "unknown"
    -i, --hardware-platform print the hardware platform or "unknown"
    -o, --operating-system print the operating system
        --help display this help and exit
        --version output version information and exit
```

1.2 Commands

```
rm cami@bender:~/test$ ls
todelete.txt
cami@bender:~/test$ rm todelete.txt
cami@bender:~/test$ ls
```

`touch` updates the access and modification times of each FILE to the current time.

```
cami@bender:~/test$ ls -l
-rw-r--r-- 1 cami cami 0 2009-08-25 20:29 date.txt
cami@bender:~/test$ touch date.txt
cami@bender:~/test$ ls -l
-rw-r--r-- 1 cami cami 0 2009-08-25 20:30 date.txt
```

It can be very useful to create a new empty file on the fly:

```
~/test$ ls
~/test$ touch emptyfile.txt
~/test$ ls
emptyfile.txt
```

`man` shows the manual pages of the given command.

```
$ man <comman>
$ man man
```

`ls` shows the content of the current working directory.

```
$ ls
documentation.aux
documentation.log
documentation.out
documentation.pdf
documentation.tex
documentation.tex~
Makefile
test.tex
$ ls -R
.:
documentation.aux
documentation.log
documentation.out
documentation.pdf
documentation.tex
documentation.tex~
folder
Makefile
test.tex

./folder:
test.txt
```

`mv` moves and renames files and directorys

```
$ mv a b
```

This command does the folloing:

If there is a directory named b: a will be moved into b

If there is a file named b and a isn't a directory: b will be overwritten by a

If there isn't anything named b: a is now named b

`find` finds files matching a pattern

```
$ find . -name "*bla*" -print
```

This prints every file in the current working directory with the word "bla" in its name.

`grep` searches for a string in a textfiie.

```
$ grep Hunde file.txt
In diesem Text geht es um Hunde
Hunde und Katzen also
$ grep Katzen file.txt
und Katzen
Hunde und Katzen also
$ grep Katzen file.txt | grep Hunde
Hunde und Katzen also
```

pipes pass results over to another command.

```
$ ls | less
# This pipes the result of 'ls' to the command less
# which displays it with the ability to scroll.

$ grep dog file.txt | grep cat
# This searchs the file 'file.txt' for any lines containing cat AND dog
```

redirects write the result of a command in a file.

```
$ ls -GlF > file.txt
# This writes the result of the 'ls' command in thh file 'file.txt'

$ date >> file.txt
# This appends the current date and time to the file 'file.txt'

$ wget ?> file.txt
# This writes only the raising warningns into the file.
```

2 Documentation with Latex

2.1 Introduction

In this section we explain some LaTeX details and different formatting commands.

Whenever you need to lookup a certain symbol for LaTeX we suggest you to use the online recognition tool `detexify` at `http://detexify.kirelabs.org/`.

2.2 Common Commands

2.2.1 Sectioning

Depening on the documentclass given in the very beginning of this file there exist several sectioning levels:

1. `\section{NAME}`
2. `\subsection{NAME}`
3. `\subsubsection{NAME}`
4. `\paragraph{NAME}`

To enforce LaTeXto use a newline add a double slash `\\` at the end of a line.

2.2.2 Schriftgrösse / -style

`\rm`	A normaler text
`\sl`	*An italic text*
`\bf`	**A bold text**
`\tiny`	A tiny ext
`\scriptsize`	A very, very small text
`\footnotesize`	A very small text
`\small`	A small text
`\large`	A big text
`\Large`	A bigger text
`\LARGE`	An even bigger text
`\huge`	A huge text
`\Huge`	A enormous huge text
`\emph`	*An emphasized text*
`\underline`	An underlined text and here using the ulem-package
`\texttt`	`function goto(int a) ...`
`\uuline`	A double unterstrichener text using the ulem-package
`\uwave`	A wavy unterstrichener text using the ulem-package
`\sout`	~~A crossed trough text using the ulem-package~~
`\xout`	*A deleted text using the ulem-package*

2.2.3 Notes

To create a footnote use the `\footnote{YOUR NOTE}` command[1].
If you want to put a remark at side of a page use `\marginpar`.

This is a note at the border of the page.

[1] ... as you can see here.

2.2.4 Lists

There exist several list types in LaTeX. You start a list by adding a `\being{LISTTYPE}` and end it with an `\end{LISTTYPE}`. A list item is added with a `\item` between the `begin` and `end`. `LISTTYPE` can be one of the following list:

- `enumerate`
- `itemize`
- `description` with `\item[topic]`

Note that you can nest lists if you want to.

1. e4
    a) e4 e5
    b) Lc4 d6
2. Lc4 d6

3 Ruby Programming