

AsciiDoc & Latex

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1 preface

Prerequisites for this chapter are

- familiarity with the C programming language and how to build programs on the command-line
- electronic fundamentals like know how to dimension small circuits
- ...

When working through this chapter you shall be able to

- efficiently read and understand data-sheets and user-manuals of micro-controllers
- know about registers and how to access them
- ...

Page Layout

Arsclassica-L^AT_EX is an article style, thus using AsciiDoc one will need to stick to the top-level heading styles set with ==, ==~, etc. respectively.

2 images and figures

Expect the *usual* quirks with figures in \LaTeX and all word processing tools. You'll eventually need to move the figures around in order to get an optimal placement.

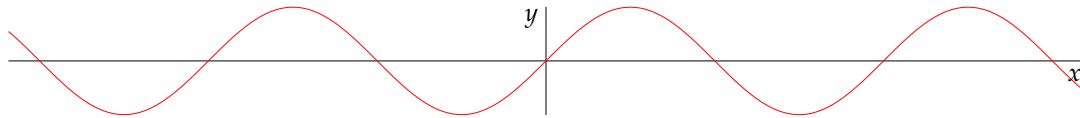


Figure 1: This graph shows $y = \sin x$ from about $x = [-10, 10]$. Notice that this figure takes up the full page width.

Figure 1 spans the entire page width by default. The figure's caption is derived from the image block title. The figure itself is set using `image::sine.{imgext}[]`.

In order to scale figures you may use the `scale` or the `width` parameter, e.g.:

```
.Hilbertcurves 115% scaled
image::source/hilbertcurves.{imgext}[scale=".115"]
```

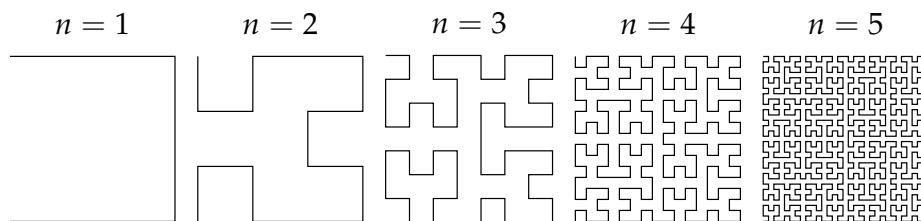


Figure 2: Hilbertcurves 115% scaled

3 code listings

Code snippets are set using the `lstlisting` package. The following example illustrates the respective output of the following AsciiDoc snippet:

```
.Hello World Example
[source,c,numbered]
----
include::source/hello.c[]
----
```

In this case the parameter `c` is passed on to the `lstlisting` package to select the appropriate language.

4 verbatim input

To describe commands entered at a terminal prompt we adapt a verbatim environment. Respective code is set between multiple dots and results in an output as in the following example.

Listing 1: Hello World Example

```

1 // the usual 'hello world' example in C
2 #include <stdio.h>
3
4 int main(void)
5 {
6     printf("Hello World!\n");
7     return 0;
8 }

```

```

% ls
tufte.txt latex.conf

```

5 tables

The following AsciiDoc snippet generates table 1.

```

.Table Example
[format="csv",options="header",frame="all",colspecs="c|l|l|r"]
|=====
ID, Customer Name, Contact Name, Phone
include::source/data.csv[]
|=====

```

Here the parameter `colspecs` specifies the alignment of the columns (`c`... center, `l`... left, `r`... right). Vertical lines can be drawn using a `|` between `colspecs` arguments; with the used `booktabs` package, however, this usually renders an inferior looking output. The argument `frame` supports either `all` or `topbot` as values. The first one renders three horizontal lines as illustrated in Tab. 1, whereas the latter only renders a horizontal line above and below the table. Finally, using the value `header` for the argument `options` draws the first line in bold letters. Miscellaneous

Table 1: Table Example

ID	Customer Name	Contact Name	Phone
AROUT	Around the Horn	Thomas Hardy	(171) 555-7788
BERGS	Berglunds snabbkop	Christina Berglund	0921-12 34 65
BLAUS	Blauer See Delikatessen	Hanna Moos	0621-08460

This section presents several items like admonitions, quotes, etc.

6 admonitions

Admonitions are small paragraphs that try to highlight something. Often admonitions are set along with a small icon and try to state either a `NOTE`, `TIP`, `IMPORTANT`, `WARNING`, or `CAUTION` statement.



Place the admonition just below the text where you want the block to show up.

The following AsciiDoc code produces the admonition shown in the margin.

```
["NOTE"]
Place the admonition just below the text where you
want the block to show up.
```

For TIP, IMPORTANT, WARNING, or CAUTION you'll get different icons. All icons reside in the `images/icons/` folder are included as *.pdf* images into the \LaTeX output.

7 quotes

In the following we show a simple quotation from Johann Wolfgang von Goethe.

There is nothing more dreadful than imagination without taste.

– Johann Wolfgang von Goethe

It is set in AsciiDoc using underscores:

```
[quote, Johann Wolfgang von Goethe]
----
There is nothing more dreadful than imagination without taste.
----
```

8 links

Frequently used links are, e.g., URLs like `horauer.at` or `mailto` references (e.g. email Martin Horauer). In AsciiDoc simply write:

```
http://www.horauer.at/[horauer.at]
mailto:mhorauer@gmail.com[email Martin Horauer]
```

For the use of local references one uses anchors (set using `[[anchors]]`) and references (set using `<<anchor, ref>>`) where `ref` is the actual displayed ref of the respective hyperlink.

9 bibliographies

In order to add a bibliography add a block like the following one after the body of the text:

```
[bibliography]
- [[[tufte01]]] Edward R. Tufte.
  'The Visual Display of Quantitative Information'.
  Graphics Press, Cheshire, Connecticut, 2001.
  ISBN 0-9613921-4-2.
```



The natbib style used generates a warning message that can be safely ignored.

10 indices

In order to generate an index enclose selected words within the text in double parentheses. When you want to place index entries at pages, that are hidden in the text, use triple parenthesis. Furthermore, in order to subclass index entries use commas, e.g.:

```
((heading))          # index entry where heading is visible in the text
(((heading)))        # index entry where heading is invisible
(((heading,levels))) # invisible index entry with a sub-element
```

In order to insert the index create an empty index section at the end of the document, e.g.:

```
[index]
== Index

////////////////////////////////////
The index is normally left completely empty, it's contents being
generated automatically by the makeindex command.
////////////////////////////////////
```

Finally, to generate the index entries run:

```
% pdflatex tufte
% makeindex tufte
% pdflatex tufte
```

references

- [1] Edward R. Tufte. *The Visual Display of Quantitative Information*. Graphics Press, Cheshire, Connecticut, 2001. ISBN 0-9613921-4-2.
- [2] Edward R. Tufte. *Beautiful Evidence*. Graphics Press, Cheshire, Connecticut, 2006. ISBN 0-9613921-7-7.

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