

The package `float.sty`

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5. November 2000

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Chapter 1

A New Type of Float

With the L^AT_EX float-packages you can define you own types of floats. This document is written in bookstyle, which is important to show one of the options of the float-package.

The first Message 1.1 shows an easy definition of a new float with the defaults. The caption can be written as `\caption{...}` and the label as usual.

This is an example for a new float type Messages, which uses all the defaults and a name for the type which can be used for the caption, too. Therefore the definition is easy:

```
\usepackage{float}
\newfloat{Messages}{htb}{loM}[chapter]
```

The arguments are:

Messages the name of the float. Important for the caption and the latex-syntax (see below)

htb Placement, valid for all floats of type Messages

loM: the name of the file which stores the captions for a list of Messages

chapter numbering inside chapters, makes sense for the book-classes.

Messages 1.1: my First Caption for my first Message float

The boxed float Message 1.1 belongs to the latex-commands

```
\begin{Messages}
\centering
\fbbox{\parbox{0.8\textwidth}}{%
...

```

which do not have anything to do with the new float-style. This is possible with any type of float.

1.1 Floatstyle

The style of the floats may be changed with the `floatstyle` command and the options

- plain
- boxed
- ruled

The `\floatstyle` command is a nice feature for the style of a float. The new float `myPics` is defined as a ruled float and the `section`-option for the caption-numbering.

Picture 1.1.1 my second Caption for my first Message float

This is an example for float-type `myPics`, which was defined behind a `\newfloat{ruled}` - command. The name of the float for the caption was changed with the `\floatname{}{} - command`. This was all done in the latex preamble:

```
\floatstyle{ruled} \newfloat{myPics}{htb}{}[section]
\floatname{myPics}{Picture}
```

1.2 FLoatplacement

Changing the predefined floatplacement of **any** float-type can be changed with the `\floatplacement-` command.

Writing a `\floatplacement{Messages}{b}` redefines the placement **bottom** for the next `messages-float`. This `Messages 1.3` appears in the text in the next line, but in the \LaTeX -output at the end of this page!

But this gives some problems with the following floats! Every following float can't be placed before this float which is on the top of a page! The `Picture 1.3.1` is behind `Messages 1.3`, which makes no sense, because there is enough place on this page to put **before** `Picture 1.3.1`!

1.3 Restyle floats

With the `\restylefloat`-command it is possible to change the style of **any** float to another float-style. The commands

```
\floatstyle{boxed}
\restylefloat{myPics}
```

The float `Picture 1.3.1` which belongs to this section, is on the next page in fact of the floating placement of `Messages 1.2` of Section 1.2.

Another <code>messages-float</code> , which is placed with the <code>\floatplacement{Messages}{b}</code> command at the bottom of this page

Messages 1.2: my Caption for my second Message float

This is another example for float-type `myPics`, called `Picture` in the caption and defined with the `boxed`-option and a placement `[htb]`.

Picture 1.3.1: my Caption for my second `myPics` float

1.4 The H-option

With this option you can place your float as **ABOSLUTELY HERE** and nothing elsewere!

ABOSLUTELY HERE

Messages 1.3: my Caption for my third Message float

But this gives another error of the float-package: it can't handle the numbering, because this Message 1.3 is **before** Message 1.2!!

Therefore you have to pay attention, when using the H-option.

1.5 Standard figure- and table-floats

Here comes a figure-float (Figure 1.1) and a table-float (Table 1.1), too. Both only for demonstration!

Table 1.1: my Table-Caption

a	b	c
10	11	12

here is no figure :-)

Figure 1.1: my Figure Caption

1.6 The listof command

With the `\listof{float}{title}` -command you'll get a list of your own floats. Here they come with the commands:

```
\listof{Messages}{List of the Messages}
\listof{myPics}{List of my Pics}
```

Remeber, that we have the book-style, therefore `listof` belongs to the same like `listoffigures`, which appear on own pages at the end of your document!

List of the Messages

1.1	my First Caption for my first Message float	2
1.2	my Caption for my second Message float	3
1.3	my Caption for my third Message float	4

List of my Pics ;-)

1.1.1 my second Caption for my first Message float	3
1.3.1 my Caption for my second myPics float	4

List of Figures

1.1 my Figure Caption 4

List of Tables

1.1 my Table-Caption 4