

Environments

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1 Lists

1. You can nest the list environments to your taste:

- But it might start to look silly.
- With a dash.

2. Therefore remember:

Stupid things will not become smart because they are in a list.

Smart things, though, can be presented beautifully in a list.

2 Alignment

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3 Quotes

3.1 quote, quotation

`quote`

A typographical rule of thumb for the line length is:

On average, no line should be longer than 66 characters.

This is why L^AT_EX pages have such large borders by default and also why multicolumn print is used in newspapers.

`quotation`

The quotation environment is useful for longer quotes going over several paragraphs, because it indents the first line of each paragraph.

3.2 verse

I know only one English poem by heart. It is about Humpty Dumpty.

Humpty Dumpty sat on a wall:
Humpty Dumpty had a great fall.
All the King's horses and all the King's men
Couldn't put Humpty together again.

4 Abstract

Abstract

 Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper.

5 Printing Verbatim

The verbatim environment and the \verb command may not be used within parameters of other commands.

5.1 As a Block

```
#include <stdio.h>

int main(void)
{
    printf("hello, world\n");
    return 0;
}
```

The * version

```
#include<stdio.h>

int_main(void)
{
    printf("hello,world\n");
    return 0;
}
```

5.2 Interpolate

Or within a *paragraph* eiei.

The + is just an example of a delimiter character.

Use any character except letters, * or space. Many L^AT_EX examples in this booklet are typeset with this command.

Also has a * version

```
like_this:-)
```

6 Tabulation

```
\begin{tabular}[pos]{table spec}
```

table spec

l	column of left-aligned text
r	right-aligned text
c	centered text
p{width}	column containing justified text with line breaks
	vertical line

If the text in a column is too wide for the page, L^AT_EX won't automatically wrap it. Using p{width} you can define a special type of column which will wrap-around the text as in a normal paragraph.

6.1 Simple Table

7C0	hexadecimal
3700	octal
11111000000	binary
1984	decimal

Wrapping

```
Welcome to Boxy's paragraph.  
We sincerely hope you'll all enjoy the show.
```

Leading Spaces

no leading space	leading space left and right
------------------	------------------------------

Decimal Point

Pi expression	Value
π	3.1416
π^π	36.46
$(\pi^\pi)^\pi$	80662.7

Column Labeling

Pi expression	Value		
π	3.1416	Ene	
π^π	36.46	Mene	Muh!
$(\pi^\pi)^\pi$	80662.7		

6.2 \arraystretch and \tabcolsep

These lines are tight	less cramped table layout
--------------------------	------------------------------

Single Row Height

Pitprop ...
Strut

6.3 Long Tables

to be continued...

7 Including Graphics and Images

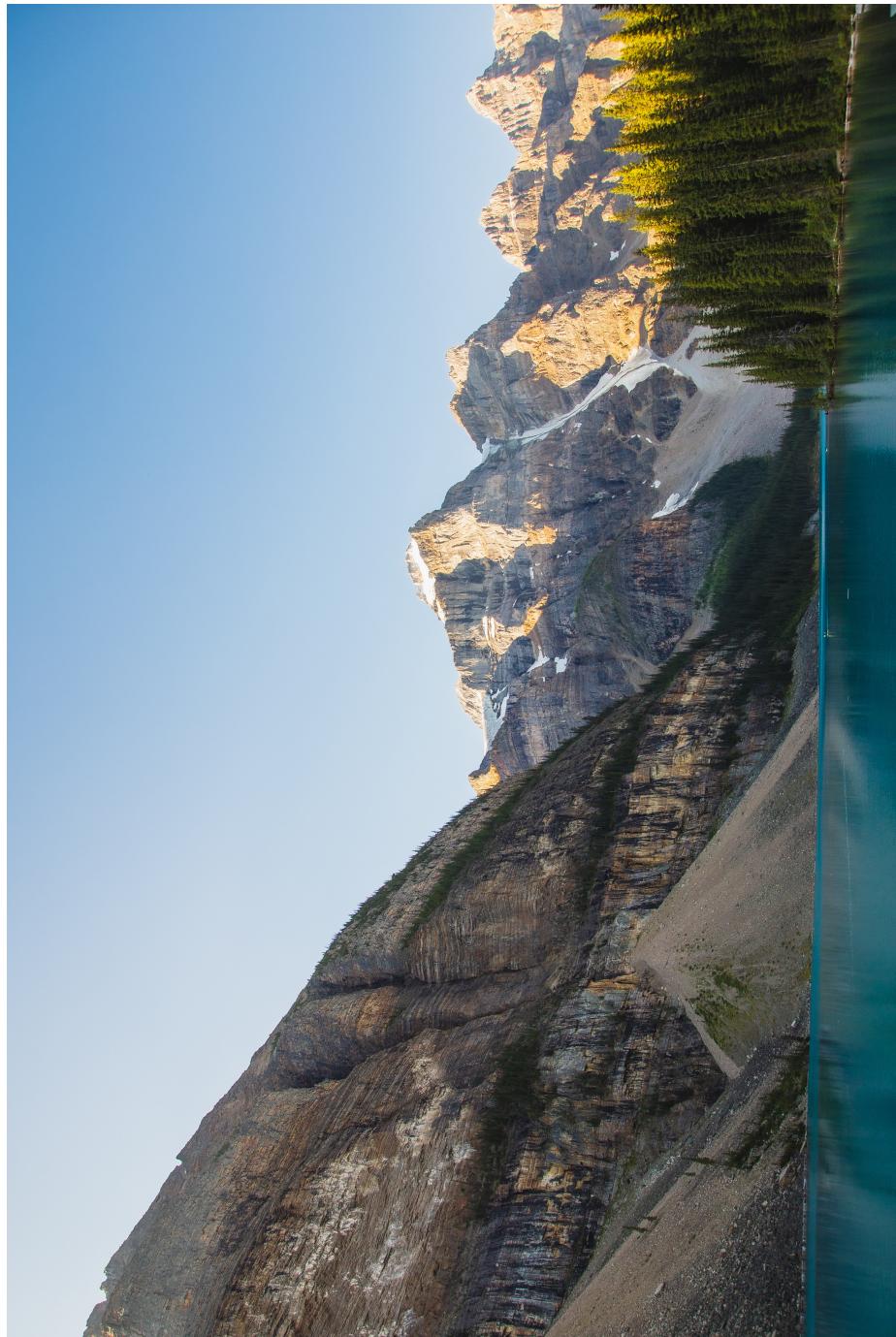
7.1 graphicx Package

```
\includegraphics[key=value]{filename}
```

Table 1: Key Names

width	scale graphic to the specified width
height	scale graphic to the specified height
angle	rotate graphic counterclockwise
scale	scale graphic

\includegraphics[angle=90,width=\textwidth]{img/mountain.jpg}



8 Floating Bodies

```
\begin{figure}[placement specifier] or \begin{table} [...]
```

Float Placing Permissions

If no placement specifier is given, the standard classes assume [tbp].

Table 2: Float Placement Permissions

Specs	Permission
h	Place the float <code>here</code> , i.e., approximately at the same point it occurs in the source text (however, not exactly at the spot)
t	Position at the <code>top</code> of the page.
b	Position at the <code>bottom</code> of the page
p	Put on a special <code>page</code> containing only floats only.
!	Override internal parameters, such as the maximum number of floats allowed on one page, those L ^A T _E X uses for determining “good” float positions.
H	Places the float at precisely the location in the L ^A T _E X code. Requires the float package (<code>\usepackage{float}</code>). This is somewhat equivalent to h!, though some errors may arise if you have too many consecutive floats with [H].

L^AT_EX will place every float it encounters according to the placement specifier supplied by the author. If a float cannot be placed on the current page it is deferred either to the figures queue or the tables queue.¹⁵ When a new page is started, L^AT_EX first checks if it is possible to fill a special ‘float’ page with floats from the queues. If this is not possible, the first float on each queue is treated as if it had just occurred in the text: L^AT_EX tries again to place it according to its respective placement specifiers (except ‘h,’ which is no longer possible). Any new floats occurring in the text get placed into the appropriate queues. L^AT_EX strictly maintains the original order of appearance for each type of float. That’s why a figure that cannot be placed pushes all further figures to the end of the document. Therefore:

If L^AT_EX is not placing the floats as you expected, it is often only one float jamming one of the two float queues.

While it is possible to give L^AT_EX single-location placement specifiers, this causes problems. If the float does not fit in the location specified it becomes stuck, blocking subsequent floats. In particular, you should never, ever use the [h] option—it is so bad that in more recent versions of L^AT_EX, it is automatically replaced by [ht].

8.0.1 Captioning

```
\caption{caption text}
```

Defining a caption for the float.

A running number and the string “Figure” or “Table” will be added by L^AT_EX.

For long captions:

```
\caption[short]{loooooooooooooooooooooong}
```

Figure 1: Looooooooooooooooooooong (At the backmatter, on page: ii)

```
\listoftables and \listoffigures
```

These two commands operate analogously to the `\tableofcontents` command.

Under certain circumstances it might be necessary to use either of these commands:

```
\clearpage or even the \cleardoublepage
```

It orders L^AT_EX to immediately place all floats remaining in the queues and then start a new page. `\cleardoublepage` even goes to a new right-hand page.

Figure 2 is an example of Pop-Art.

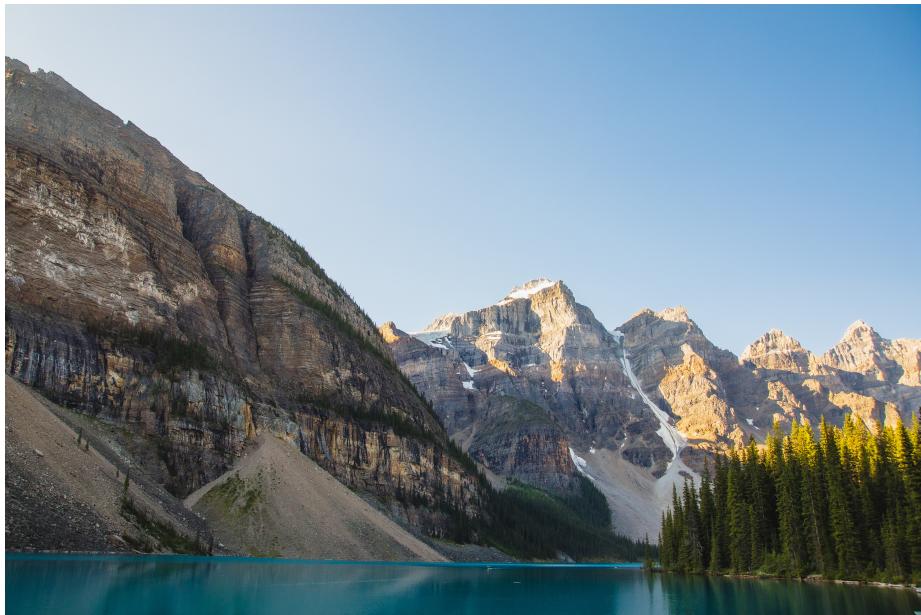


Figure 2: Calm lake surrounded by mountains by Ryutaro Tsukata.

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