

Introduction to L^AT_EX 2_ε



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GRUPE D'ÉTUDES ET DE RECHERCHE
EN ANALYSE DES DÉCISIONS

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1.1 What is \LaTeX ?

- ▶ **Pronunciation** of \LaTeX – the last letter is not an “x”, but the Greek letter χ , which is pronounced as “k”; therefore we say “latek”.
- ▶ **Text formatter** using a typographic programming language, rather than a word processor (Word)
- ▶ Editing scientific documents (a TeX document is a file written with any text editor in which the text is mixed with layout commands, similar to html code)
- ▶ \LaTeX is a set of macro-commands (developed by Leslie Lamport) based on TeX (written by Donald Knuth in the 80's)
- ▶ $\LaTeX 2_{\epsilon}$ allowed the addition of modules (extensions, packages) to meet specific needs (longtable, geometry, fancyhdr ...)
- ▶ $\LaTeX 3$ Project

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- 1.1 What is \LaTeX ?
- 1.2 Why \LaTeX (instead of Word)?
- 1.3 The power of \LaTeX
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1.2 Why L^AT_EX (instead of Word)?

- ▶ **for mathematical formulas easy to write and well disposed visually**
- ▶ for its free and available nature
- ▶ for its ease of switching from one platform to another (Windows, Unix, Linux, Apple) (useful in research centers where not all people necessarily work on the same platforms)
- ▶ for its ease of transport (very small files)
- ▶ for its multilingualism
- ▶ for a professional presentation, without worrying about the layout
- ▶ **for facilitated cross-references (figures, tables, bibliographic references, appendices, equations, theorems, sections, etc., and even a page number)**
- ▶ for the possibility of subdividing a document into several small files without worrying about pagination, cross-references, references
- ▶ **publishing houses and scientific journals have style files with template files**

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1.3 The power of L^AT_EX

- ▶ How I use it
- ▶ Examples
 - ▶ scientific graphs
 - ▶ TEXample.net
 - ▶ Communauté élargie — StackExchange
- ▶ How will you use it?
 - ▶ Overleaf Template: <https://fr.overleaf.com/>
 - ▶ GERAD Template: <https://www.gerad.ca/fr/publications/papers/cahiers-procedure>
 - ▶ Symbols:
<http://detexify.kirelabs.org/classify.html>

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1.4 The workshop

Objectives

- ▶ At the end of this workshop, you should understand what is L^AT_EX and be able to start your first document, know the possibilities offered by L^AT_EX, discern best practices, and know where and how to look for the answers to your questions.

Procedure

- ▶ We will see what constitutes a L^AT_EX document: the commands, the structure of a document, the creation of a title page, the mathematical mode, the text mode, the creation of lists, tables and the insertion of images. We will discuss what floating objects are, the creation of cross-references.
- ▶ We will finish with the technical aspects related to L^AT_EX, that is, its functioning, the different text editors and the compilation process.
- ▶ Finally, the references cited in the "Reference" section will be used throughout the workshop to demonstrate their usefulness.

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- ▶ The order of packages
- ▶ The number of packages
- ▶ A nice and clean code
- ▶ Leaving L^AT_EX doing its job

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2.1 Special characters

L^AT_EX uses special characters for its commands:

<code>\</code>	control character of L ^A T _E X
<code>{ }</code>	groupings or ordering parameters
<code>&</code>	alignments in tables and maths
<code>#</code>	used in macrocommands
<code>\$</code>	open and closes math mode
<code>^</code>	an exponent in math mode, <code>\$x^p\$</code> will give x^p
<code>_</code>	index in math mode, <code>\$x_p\$</code> will give x_p
<code>~</code>	unbreakable space

As `~` is a character that is also used as an accent on letters, In Spanish, for example, to make it appear on its own, you must use `textasciitilde`. In the case of a web page address, use `{\sim$}`, which will give `~`. For half unbreakable space, do `\,`

`%` to write comments. Everything that follows the character `%` on the same line is ignored by L^AT_EX. For a paragraph on several lines, you must put `%` at the beginning of each line.

To have these characters in a text, you must precede them by `\`. Example: `\$` will give `$`. Only the backslash must be written `backslash$` in math mode or `textbackslash` in normal mode. `\\` is a command to change a line with L^AT_EX.

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Source file (fichier.tex)

2.2 The three essential commands

1. `\documentclass[options]{style}` *first active command*
preamble
 2. `\begin{document}`
text of the document
 3. `\end{document}` *last active command*
- ▶ **Styles** : article, report, book, beamer ...
 - ▶ **Options** : font size (12pt, 11pt, 10pt – by default font), fleqn, leqno, twoside, twocolumn ...
 - ▶ **Preamble** : defining macros, redefinition of commands, packages, commands that affects all the document ...

✓ *Everything that goes after the `\end{document}` is ignored by L^AT_EX; you can leave comments, notes or text to be used later.*

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2.3 Example of a source file

```
\documentclass[11pt]{article}
\usepackage{amsmath,amssymb}
\usepackage{latexsym}
\usepackage{graphicx}
\usepackage{geometry}

\geometry{letterpaper,tmargin=3cm,
bmargin=3cm,lmargin=3cm,rmargin=3cm}
```

préambule

```
\pagestyle{plain}

\title{Titre du document}
\author{Moi-m\^eme}
\date{Mai 2013}
```

page titre

```
\begin{document}
\maketitle
\thispagestyle{empty}
```

table des
matières

```
\newpage
\thispagestyle{empty}
\tableofcontents
```

résumé

```
\newpage
\thispagestyle{empty}
\begin{abstract}
Ceci est un r\'esum\'e de ce fameux papier
que j'\`ecrirai plus tard.
\end{abstract}
```

document

```
\newpage
\setcounter{page}{1}
\section{Introduction}
\label{sec-intro}
Et voil\`a c'est partiii
Bla-bla-bla ...
```

bibliographie

```
\section*{Remerciements}
Je d\'esire remercier mon p\`ere, ma m\`ere ...

\begin{thebibliography}{99}
\bibitem{GooMS1994}
Goossens, M., Mittelbach, F., Samarin, A.,
\textit{The LATEX Companion},
Addison-Wesley Publishing Company, 1994.
\end{thebibliography}
```

```
\end{document}
```

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2.4 Commands

- ▶ 2 modes: text mode or normal and math mode
 - ▶ different accents, different spacing, etc.
- ▶ Types of commands:
 - ▶ commands using letters ($\sum a_i = \sum a_i$)
 - ✓ they require an extra space, otherwise you change the name of the command, for example: `\suma_i`, will give when compiled `... \suma` - command undefined.
 - ▶ commands using characters other than letters (accents `\'et\'e` = `été`)
 - ▶ commands modifying the contents of the current grouping starting from the insertion point (`\bfseries`, `\itshape`)
 - ▶ commands modifying solely the contents of the following grouping (`\textbf{}`, `\textit{}`)
 - ▶ environments commands – grouping starting on another line (`\begin{center} ... \end{center}`, `\begin{quote} ... \end{quote}`)
 - ▶ Commands can have one or more parameters, enclosed in braces: `{ }`. They can also have optional parameters, in square brackets: `[]`.
 - ▶ `\newline` (no parameters)
 - ▶ `\frac{n+1}{n+2}` (two parameters)
 - ▶ `\documentclass[12pt]{article}` (two parameters, one optional and one necessary)

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Accents and symbols

ò	\‘o	ó	\’o	ô	\~o	õ	\~o	ō	\=o	ô	\.o
ö	\"o	ø	\u{o}	ö	\v{o}	ó	\H{o}	ø	\c{o}	ø	\d{o}
o	\b{o}	oo	\t{oo}								
œ	\oe	Œ	\OE	æ	\ae	Æ	\AE	å	\aa	Å	\AA
ø	\o	Ø	\O	†	\l	‡	\L				
ı	\i	ı	\j	ı	!‘	ı	?‘				

Fonts

<code>\textrm{...}</code>	roman	<code>\texttt{...}</code>	typewriter
<code>\textsf{...}</code>	sans serif	<code>\textbf{...}</code>	bold face
<code>\textup{...}</code>	upright	<code>\textit{...}</code>	<i>italic</i>
<code>\textsc{...}</code>	small caps	<code>\textsl{...}</code>	<i>slanted</i>
<code>\textnormal{...}</code>	document font	<code>\emph{...}</code>	<i>emphasised</i>

Sizes

<code>\tiny</code>	<code>\large</code>
<code>\scriptsize</code>	<code>\Large</code>
<code>\footnotesize</code>	<code>\LARGE</code>
<code>\small</code>	<code>\huge</code>
<code>\normalsize</code>	<code>\Huge</code>

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2.5 Structure of a document

- ▶ `\part{Title of a part}`
- ▶ `\chapter{Title of a chapter}` (document class “report” and “book”)
- ▶ `\section{Title of a section}`
- ▶ `\subsection{Title of a sub-section}`
- ▶ `\subsubsection{Title of a sub-sub-section}`
- ▶ `\paragraph{Title of a paragraph}` (text on the same line than the title)
- ▶ `\subparagraph{Title of the sub-paragraph}` (text on the same line than the title)
- ▶ `\maketitle` (title page, see next page)
- ▶ `\tableofcontents` (table of content), also `\listoffigures` and `\listoftables`
- ▶ `\begin{abstract} . . . \end{abstract}` (abstract, font smaller and indented on both sides)
- ▶ `\footnote{text}` (footnote)

✓ *The star (`\section*{Titre de section}`) removes the numbers (no more reference possible), but keeps the same style.*

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2.6 Title page

- ▶ `\title{Title of the document}`
- ▶ `\author{Author}` – `\and` between each author
- ▶ `\date{}` - leave blank if you don't want a date, otherwise it will be set automatically
- ▶ `\maketitle` – where we want the title to appear

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2.7 Text

- ▶ multiple spaces between words and/or between lines are considered as a single space
- ▶ `\\` or `\newline`: line break without starting a new paragraph
- ▶ a minimum of two line breaks: paragraph change
- ▶ `\break`: change of line, justifying the line on which it is written
- ▶ `\newpage`: a forced page break
- ▶ `\pagebreak`: a desired page break
- ▶ `\clearpage`: empty the float memory and create a new page
- ▶ word hyphenation:
 - ▶ locally: `su\per\la\tif`
 - ▶ globally: `\hyphenation{su-per-la-tif}` in the preamble

✓ *Be careful with quotation marks: don't use the " key on the keyboard. In typography, there must be opening and closing quotation marks. In English, use two ' for opening and two ' for closing.*

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2.8 Math mode

- ▶ in the text: in between `\(...\)` or `$...$`
`100 m$^{-3}$ of water \ldots\ then $\alpha = \sqrt{5}$` will give 100 m^3 of water ... then $\alpha = \sqrt{5}$
 ✓ *do not use maths to italicize text – spacing and accents are different*

- ▶ in display (centered, space on top and under): in between `\[... \]`
`\[c^{-2}=a^{-2}+b^{-2} \]` will give

$$c^2 = a^2 + b^2$$

✓ `$$... $$` works, but we ask you not to use them any more, as they are no longer taken into account by certain class options.

- ▶ numbered displayed (centered, space at top and bottom, automatic numbering and possible reference):

```
\begin{equation}
\epsilon > 0 \quad \label{eq:eps}
\end{equation}
```

$$\epsilon > 0 \tag{1}$$

✓ *There are several other mathematical environments (align, multiline, eqnarray ...) to see in the next class.*

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2.9 Spacing

- ▶ possible measurement units:
 - mm millimeter
 - cm centimeter
 - in inche
 - pt point $\approx 1/72$ inche $\approx .35$ mm
 - em width of a m in the current font
 - ex height of a x in the current font
- ▶ horizontal spacing: `\hspace{measure}` or `\hspace*{measure}`
also `\quad`, `\qquad` and in maths: `\,`, `\>` `\!``\$`
- ▶ vertical spacing: `\vspace{measure}` or `\vspace*{measure}`
also `\smallskip`, `\medskip` ou `\bigskip` which are spacings according to the size of the font used

✓ *The star shape obliges L^AT_EX to respect what is requested, even in cases where it doesn't take this into account because of its layout.*

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2.10 Lists

Three environments:

- ▶ `itemize` for simple lists
- ▶ `enumerate` for numbered lists
- ▶ `description` for descriptions

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Itemize environment

Sans option – compteur de L^AT_EX

```
\begin{itemize}
\item Premier niveau.

\begin{itemize}
\item Deuxième niveau.
\end{itemize}

\item Nous sommes revenus au premier niveau
avec le compteur de \LaTeX.
\end{itemize}
```

- Premier niveau.
 - Deuxième niveau.
- Nous sommes revenus au premier niveau avec le compteur de L^AT_EX.

Avec options

```
\begin{itemize}
\item[i] Nous avons décidé d'employer
des lettres suivies de parenthèses.
\item[ii] On peut ici aussi employer un
deuxième niveau.

\begin{itemize}
\item[\textit{(a)}] On peut également
changer la fonte.
\end{itemize}

\item[iii] Retour au premier niveau.
\end{itemize}
Ceci est la largeur totale du texte
sans aucune indentation.
```

- i) Nous avons décidé d'employer des lettres suivies de parenthèses.
 - ii) On peut ici aussi employer un deuxième niveau.
 - (a) On peut également changer la fonte.
 - iii) Retour au premier niveau.
- Ceci est la largeur totale du texte sans aucune indentation.

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Enumerate environment

Sans option – compteur de L^AT_εX

```
\begin{enumerate}
\item Premier niveau.
\begin{enumerate}
\item Deuxième niveau.
\end{enumerate}
\item Nous sommes revenus au premier niveau
avec le compteur de \LaTeX.
\end{enumerate}
```

1. Premier niveau.
 - (a) Deuxième niveau.
2. Nous sommes revenus au premier niveau avec le compteur de L^AT_εX.

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Sans option – compteur de L^AT_EX

```
\begin{description}
\item Premier niveau. À noter que la deuxième
ligne et les suivantes sont indentées.
```

```
\begin{description}
\item Deuxième niveau. Ici aussi les autres
lignes seront indentées.
\end{description}
```

```
\item Nous sommes revenus au premier niveau
avec le compteur de \LaTeX.
\end{description}
```

Premier niveau. À noter que la deuxième ligne et les suivantes sont indentées.

Deuxième niveau. Ici aussi les autres lignes seront indentées par rapport à la première.

Nous sommes revenus au premier niveau avec le compteur de L^AT_EX.

Avec options

```
\begin{description}
\item[essai 1] Notez que l'option est en gras et
que la deuxième ligne sera indentée.
\item[essai 2] On peut ici aussi employer un
deuxième niveau.
```

```
\begin{description}
\item[\textit{(a)}] On peut également changer la
fonte et c'est toujours en gras.
\end{description}
```

```
\end{description}
Ceci est la largeur totale du texte sans aucune
indentation.
```

essai 1 Notez que l'option est en gras et que la deuxième ligne sera indentée.

essai 2 On peut ici aussi employer un deuxième niveau.

(a) On peut également changer la fonte et c'est toujours en gras.

Ceci est la largeur totale du texte sans aucune indentation.

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```
\begin{tabular}{table description}
texte du tableau
\end{tabular}
```

- ▶ table description:
 - ▶ l column with left aligned text
 - ▶ r column with right aligned text
 - ▶ c column with centered aligned text
 - ▶ p{width} column with justified text on many lines
 - ▶ | table's vertical line
- ▶ in the table:
 - ▶ & pass to the next column
 - ▶ \\ to the next row
 - ▶ \hline insert an horizontal line
- ▶ tables where the description is a sequence (little trick):
 - ▶ `\begin{tabular}{*{n}{columns style}}` where n is the number of repetitions, and the model can be any column specifier
 - ▶ `{1*{3}{cccr}}`
 - ▶ `{1*{12}{r}}` instead of `{1rrrrrrrrrrrrrr}`

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100	camels	<code>\begin{tabular}{rl}</code>
3700	goats	<code>\toprule</code>
1111	elephants	<code>100 & camels \\</code>
4911	animals	<code>3700 & goats \\</code>
		<code>1111 & elephants \\</code>
		<code>\midrule</code>
		<code>4911 & animals \\</code>
		<code>\bottomrule</code>
		<code>\end{tabular}</code>

100	camels and ele- phants	<code>\begin{tabular}{lp{2.5cm}}</code>
3700	goats, giraffe and koalas	<code>\toprule</code>
		<code>100 & camels and elephants \\</code>
		<code>3700 & goats, giraffe and \newline</code>
		<code>koalas \\</code>
		<code>\bottomrule</code>
		<code>\end{tabular}</code>

Tip for aligning columns differently with the array extension. Commands to put in the preamble::

```
\newcolumntype{L}[1]{>{\raggedright\arraybackslash}p{#1}}
\newcolumntype{C}[1]{>{\centering\arraybackslash}p{#1}}
\newcolumntype{R}[1]{>{\raggedleft\arraybackslash}p{#1}}
```

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2.12 Inserting images

- ▶ `\usepackage{graphicx}`
- ▶ files in eps or pdf/jpg/png format for PDF L^AT_EX
- ▶ `\includegraphics{figure-intro.pdf}`
- ▶ optionnals parameters
 - `width` width of the figure
 - `height` height of the figure
 - `angle` turn figure clockwise (degrees)
 - `scale` scale of the figure



```
\includegraphics[width=1cm]{figure-intro.jpg}
```

✓ *To avoid distorting the image, define only the width or height, and L^AT_EX will resize it proportion to the original.*

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2.13 Floating objects (figures, tables, algorithms, ...)

- ▶ floating objects or environments, i.e. location chosen by L^AT_EX as close as possible to where they are required
- ▶ optional parameters or **placement**
 - t for “top” of the page
 - b for “bottom” of the page
 - p for “page”, a floating page
 - h for “here”, just here
 - ! ignore internal parameters (e.g. maximum number of floats per page)
- ▶ `\caption{title}` – in top or bottom of the environment, at your choice
- ▶ numbered – possible reference
- ▶ `\listoffigures` or `\listoftables`

✓ *Do not put the caption and/or the label in the environment center. This mixes up the counter and runs the risk of setting the section number when you try to refer to the floating object. What's more, the centralized position of the caption is determined by the document class.*

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Examples of floating objects

```
\begin{figure}[!tb]
\centering
\includegraphics[width=3cm]{licorne.png}
\caption{My first figure}
\label{fig:intro}
\end{figure}
```



Figure 1: My first figure

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```

\begin{table}[!tb]
\caption{My first table}
\label{tab:intro}
\begin{center}
\begin{tabular}{lcr}
\toprule
\multicolumn{3}{c}{\textbf{Tabular in a table}}\\
\midrule
First column & Second column
& Third column\\
and & so & on \dots\\
\bottomrule
\end{tabular}
\end{center}
\end{table}

```

Table 1: My first table

Tabular in a table		
First column and	Second column so	Third column on ...

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Figure ... many images

- ▶ **many images with only one title:** many commands `\includegraphics{...}` in the same environment `figure`
- ▶ **many images with many incremented titles:** many commands `\caption{...}` in the same environment `figure`; the figures will however be one after the other (this can be useful for two figures that absolutely must follow each other on the same page).
- ▶ **multiple images with multiple titles incremented, but side by side:** many commands `\caption{...}` in the same environment `figure`, in the columns of a `tabular`
or
many commands `\caption{...}` in the same environment `figure`, in `minipages`
- ▶ **many images with subtitles and global title for the figure:** using the environment `subfigure` of the package `subcaption` (possibility of referring to the sub-figure or global figure)
- ▶ **packages `subfig` and `subfigure`:** Obsolete packages
- ▶ **packages `subfig` and `subcaption`:** incompatibility
- ▶ `\usepackage{float}` Exercise caution
- ▶ `\usepackage[section]{placeins}` Keeps the tables and the figures in their section.

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Figure 2: A figure

```
\begin{figure}[!h]
\centering
\includegraphics[width=.2\linewidth]{cat.png}
\caption{A figure}
\label{fig:2}
\end{figure}
```



Figure 3: Two images, only one title

```
\begin{figure}[!h]
\centering
\includegraphics[width=.2\linewidth]{cat.png}
\qqquad
\includegraphics[width=.2\linewidth]{cat.png}
\caption{Two images, only one title}\label{fig:3}
\end{figure}
```

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Figure 4: Two images, two titles



Figure 5: Two images, two titles

```
\begin{figure}[!h]
\centering
\includegraphics[width=.1\linewidth]{cat.png}
\caption{Two images, two titles\label{fig:4}}
\quad \includegraphics[width=.1\linewidth]{cat.png}
\caption{Two images, two titles\label{fig:5}}
\end{figure}
```

✓ For Figures 4 and 5, there is only one environment figure, but two commands caption.

This can be useful for two figures that need to follow each other and that you don't want to separate.

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Figure 6: Two images, two titles, but side by side, tabular environment

```

\begin{figure}[!h]
\centering
\begin{tabular}{p{.47\textwidth}p{.4\textwidth}}
\centering\includegraphics[width=.1\linewidth]{cat.png}\newline
\caption{Two images, two titles, but side by side,
tabular environment \label{fig:6}}
&
\centering\includegraphics[width=.2\linewidth]{cat.png}\newline
\caption{Two images, two titles, ... \label{fig:7}}
\end{tabular}
\end{figure}

```

✓ Be careful, as adding other serials to the table may create an error message. In this case, remove the command & from the 2nd horizontal serie and add a \tabularnewline at the end of the first section. (see examples)



Figure 7: Two images, two titles, ...

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Figure 8: Two images, two titles, but side by side, minipage environment

```
\begin{figure}[!h]
\centering
\begin{minipage}[b]{0.4\textwidth}
\centering
\includegraphics[width=.7\linewidth]{cat.png}
\caption{Two images, two titles, but side by side,
minipage environment}\label{fig:8}
\end{minipage}
%
\quad
\begin{minipage}[b]{0.45\textwidth}
\centering
\includegraphics[width=.5\linewidth]{cat.png}
\caption{Two images, two titles, but side by side,
minipage environment} \label{fig:9}
\end{minipage}
\end{figure}
```



Figure 9: Two images, two titles, but side by side, minipage environment

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(a) Sub-figure 1



(b) Sub-figure 2

Figure 10: One figure with two images, two sub-titles, subfigure environment

```

\begin{figure}[!h]
\centering
\begin{subfigure}[b]{.3\textwidth}
\centering
\includegraphics[width=.1\linewidth]{cat.png}
\caption{Sub-figure 1} \label{fig:sub1}
\end{subfigure}
\begin{subfigure}[b]{.3\textwidth}
\centering
\includegraphics[width=.2\linewidth]{cat.png}
\caption{Sub-figure 2} \label{fig:sub2}
\end{subfigure}
\caption{One figure with two images, two sub-titles, subfigure
environment} \label{fig:10}
\end{figure}

```

✓ Note here that we can refer to the sub-figure (10a), or the the whole figure (10).

✓ We must use the subcaption package in the preamble.

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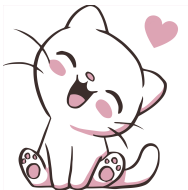
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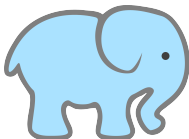
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(a) A cat



(b) An elephant

Figure 11: the subcaptionbox command

```
\begin{figure}[h!]
\centering
\subcaptionbox{A cat\label{fig:cat}}
[.4\linewidth]{\includegraphics[width=0.25\textwidth]{cat}}
\subcaptionbox{An elephant\label{fig:elephant}}
[.4\linewidth]{\includegraphics[width=0.25\textwidth]{elephant}}
\caption{the subcaptionbox command}\label{fig:animals}
\end{figure}
```

- ✓ Note here that we can also refer to the sub-figure (11a), or the the whole figure (11).
- ✓ We must use the subcaption in the preamble.

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2.14 Cross-referencing

- ▶ `\label{marker}` : Used to give the object (figure, section, table, equation, ...) you want to reference a marker – a name which can be used to refer to that object later.
- ▶ `\ref{marker}` : Used to reference an object with the specified marker. This will print the number that was assigned to the object.
- ▶ `\eqref{marker}` : refers to the label given to the equation and automatically places brackets around the equation number
- ▶ `\pageref{marker}` : Used to print the page number where the object with the specified marker is found.
- ▶ `\bibitem{marker}` : refers to the label given to a bibliography entry
- ▶ `\cite{marker}` : reref in the text texte to the bibliography entry

✓ *Note that it is the caption that gives the numbers to the floating objects. The label must be placed after or inside the caption.*

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2.15 Packages

- ▶ `\usepackage{graphicx}` to embed graphics files, eps with L^AT_EX, pdf or jpg with PDFL^AT_EX
- ▶ `\usepackage{amsmath,amssymb,amsfonts}` standard for mathematics allowing access to special characters
- ▶ `\usepackage{latexsym}` for some mathematical symbols
- ▶ `\usepackage{longtable}` for tables longer than one page
- ▶ `\usepackage{geometry}` to adjust margins
- ▶ `\usepackage{fancyhdr}` for managing headers and footers
- ▶
- ▶ `\usepackage[options]{natbib}` for bibliographies where you want the author's name and year of publication to appear in the text instead of the reference number. Even with a digital bibliography, natbib allows greater versatility, for example, choose the following options `[sort,numbers]`
- ▶ `\usepackage[nameinlink]{cleveref}` makes the best use of hyper-referencing tools

✓ `\usepackage[options]{package}` in the preamble.

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Extensions (packages)–suite

- ▶ `\usepackage[textwidth=.9\marginparwidth,linecolor=gray, textsize=scriptsize,colorinlistoftodos]{todonotes}` produces note boxes with colored text in the margin. Add: `\todo{Is it OK?}`.

- ✓ There are many others, for practically every problematic situation in the edition.
- ✓ **Note** : these are macro commands that can conflict with each other.
- ✓ Don't forget that with each extension, you'll need to learn new commands.

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- ▶ BibTeX, Zotero: <https://guides.biblio.polymtl.ca/bibtex>
- ▶ Questions/Answers: <https://tex.stackexchange.com>

Contact person

- ▶ karine.hebert@gerad.ca

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