Tutorial 2: First steps in LaTeX 2ε

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Great acts are made up of small deeds.

Lao Tse

In this tutorial you will learn how to write simple text. Begin a new document by selecting `File>New`. As you create your document you should save it regularly so you do not lose work in the event of a crash. You may want to use a LaTeX guide such as *The not so short introduction to LaTeX 2ε* by Tobias Oetiker provided on Blackboard.

1 Creating a document

In your new blank document type the following:

```
% My first document
\documentclass[12pt]{scrartcl}
\title{First steps in \LaTeX}
\author{John Doe
        \thanks{Third year CMP student}}

% End of preamble, beginning of document
\begin{document}
\maketitle
\end{document}
```

First, save your document with a name of your choice in some working directory. Process your document by clicking the `Compile` menu icon and then view it by clicking the `View` menu icon. Make sure you scroll up and down to see the entire document. Your PDF should include title, author, date and a footnote.

The beginning of the document is called the *preamble*. This is the part where stylistic information, declaration of LaTeX packages and user-defined macro commands are provided. The part between `\begin{document}` and `\end{document}` is your actual document.

Anything followed by a % is a comment. I'll tell you in a minute how you type the % sign in your text. The second line in the preamble tells LaTeX that you are using the `scrartcl` style with a 12 point font for normal text. Then you have commands to specify the title and author. The `\maketitle`, inside the document section, tells LaTeX to produce the title from the information given in the preamble.

2 Writing paragraphs

Add some text inside your document, so that the document section looks like that:

```
% end of pramble, beginning of document
\begin{document}
\maketitle
When you write    a
paragraph      with \LaTeX{}    you do not need to
   bother about the formatting. \LaTex{}    will
        take care of it.
\end{document}
```

Try to reprocess. In the bottom window you get a message that tells you there is an error in line 12. The error message is `Undefined control bother about the formatting. \LaTex`. View the PDF produced. Can you guess what the error is? A clue: the command `\LaTeX{}` produces the logo, LaTeX. *Commands are case sensitive*.

Correct the mistake, reprocess and examine the result. Notice how LaTeX started its paragraph with an indentation (one characteristic of the `scrartcl` style) and hyphenated the word at the end of the first line of text. (What a clever program!)

Modify the end of your document so that it looks like the following.

```
        take care of it.

% new paragraph when one or more blank lines

When \LaTeX{} encounters a blank line
the current paragraph finishes.
Next time it finds some text it starts a new paragraph.
\end{document}
```

Reprocess and examine the result. There are commands for changing the indentation at the beginning of paragraphs, or the space between paragraphs, but that is something that is rarely needed because module organisers will provide you with style files and templates for you to write your reports. They won't allow you to change the reports' styles (If you do you'll be stripped naked and covered with tar and feathers in the middle of the square[1].).

Sometimes you want to break a line without creating a new paragraph. To do so you may use the command `\\`. For example:

```
Next time it finds some text it starts a new paragraph.

List of things to do:\\
Learn \LaTeX, practice with \LaTeX   ,
become a \LaTeX{}pert,
write a book on \LaTeX      ,
bore the pants of students with \LaTeX.
\end{document}
```

Please use this command responsibly.

You will have noted that sequences starting with `\` are LaTeX commands In your document you have `\LaTeX{}` and `\LaTeX` on its own. When you write a command without a parameter list LaTeX gobbles up all blank characters until a non blank character is found. This is not the case when you have a parameter list between curly brackets. So an empty parameter list is used when we write `\LaTeX{}` to guarantee that blank characters that follow produce a space, or when the characters that follow is not part of

[1] Even academics can have fantasies!

the command — If you had written `\LaTeXpert` you would have got an error as there is no command with such name.

3 Special characters

I am not going to go through every special character that you may want to write. Suppose, for example, you want to write the % character in your text. LaTeX uses % to start a comment in the input. So, what should you do? Search for "%" in *The Not So Short Introduction to LaTeX2e* mentioned earlier and you should end up looking at Table 3.11 where you'll see ways of producing useful symbols. Here is an example:

```
bore the pants of students with \LaTeX.

I am 100\% sure you'll have no problem
using \LaTeX{} \ldots{} I am prepared to bet
1\pounds on it (I am not mad!).
\end{document}
```

Please try it. Carefully look at your PDF. There is something wrong. You should know how to correct the error by now[2].

Notice the `\ldots` command produces ellipsis (...) and this is not the same as typing three full stops in a row (...) (I suspect you would not want to create ugly documents.).

4 Quotation marks

One of the most frequent mistakes made by LaTeX beginners is the incorrect production of quotation marks.

```
1\pounds{} on it (I am not mad!).

"This is an incorrectly formatted quote".
\end{document}
```

[2]Note that `%` is a special character that needs prefixing by `\`, whereas `\pounds` is a command.

If you process the file and look at the result you'll see that the left quotation mark is incorrect. To produce appropriate quotation marks you should input the following:

```
"This is an incorrectly formatted quote".

``This is a correctly formatted quote''
\end{document}
```

The opening of the quote is obtained by typing the backquote character twice, and the end is obtained by typing the forward quote (apostrophe) twice. In both the ANSI and ISO layout the backquote key is at the top left of the keyboard just above the tab key.