

This lesson shows how to change the spacing elements in a document and how to add explicit formatting instructions to the LaTeX source.

We have already seen that a blank line in your input will generate a new paragraph in LaTeX. This shows up as the paragraph will start with an indent.

1 Paragraph spacing

One common style is to have no indents for paragraphs, but instead to have a ‘blank line’ between them. We can achieve that using the `parskip` package.

```
\usepackage[parfill]{parskip}
\usepackage{lipsum} % Just for some filler text
\begin{document}
\lipsum
\end{document}
```

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris.

Nulla malesuada porttitor diam. Donec felis erat, congue non, volutpat at, tincidunt tristique, libero. Vivamus viverra fermentum felis. Donec nonummy pellentesque ante. Phasellus adipiscing semper elit. Proin fermentum massa ac quam. Sed diam turpis, molestie vitae, placerat a, molestie nec, leo. Maecenas lacinia. Nam ipsum ligula, eleifend at, accumsan nec, suscipit a, ipsum. Morbi blandit ligula feugiat magna. Nunc eleifend consequat lorem. Sed lacinia nulla vitae enim. Pellentesque tincidunt purus vel magna. Integer non enim. Praesent euismod nunc eu purus. Donec bibendum quam in tellus. Nullam cursus pulvinar lectus. Donec et mi. Nam vulputate metus eu enim. Vestibulum pellentesque felis eu massa.

Quisque ullamcorper placerat ipsum. Cras nibh. Morbi vel justo vitae lacus tincidunt ultrices. Lorem ipsum dolor sit amet, consectetur adipiscing elit. In hac habitasse platea dictumst. Integer tempus convallis augue. Etiam facilisis. Nunc elementum fermentum wisi. Aenean placerat. Ut imperdiet, enim sed gravida sollicitudin, felis odio placerat quam, ac pulvinar elit purus eget enim. Nunc vitae tortor. Proin tempus nibh sit amet nisl. Vivamus quis tortor vitae risus porta vehicula.

Fusce mauris. Vestibulum luctus nibh at lectus. Sed bibendum, nulla a faucibus semper, leo velit ultricies tellus, ac venenatis arcu wisi vel nisl. Vestibulum diam. Aliquam pellentesque, augue quis sagittis posuere, turpis lacus congue quam, in hendrerit risus eros eget felis. Maecenas eget erat in sapien mattis porttitor. Vestibulum porttitor. Nulla facilisi. Sed a turpis eu lacus commodo facilisis. Morbi fringilla, wisi in dignissim interdum, justo lectus sagittis dui, et vehicula libero dui cursus dui. Mauris tempor ligula sed lacus. Duis cursus enim ut augue. Cras ac magna. Cras nulla. Nulla egestas. Curabitur a leo. Quisque egestas wisi eget nunc. Nam feugiat lacus vel est. Curabitur consectetur.

Suspendisse vel felis. Ut lorem lorem, interdum eu, tincidunt sit amet, laoreet vitae, arcu. Aenean faucibus pede eu ante. Praesent enim elit, rutrum at, molestie non, nonummy vel, nisl. Ut lectus eros, malesuada sit amet, fermentum eu, sodales cursus, magna. Donec eu purus. Quisque vehicula, urna sed ultricies auctor, pede lorem egestas dui, et convallis elit erat sed nulla. Donec luctus. Curabitur et nunc. Aliquam dolor odio, commodo pretium, ultricies non, pharetra in, velit. Integer arcu est, nonummy in, fermentum faucibus, egestas vel, odio.

Sed commodo posuere pede. Mauris ut est. Ut quis purus. Sed ac odio. Sed vehicula hendrerit sem. Duis non odio. Morbi ut dui. Sed accumsan risus eget odio. In hac habitasse platea dictumst. Pellentesque non elit. Fusce sed justo eu urna porta tincidunt. Mauris felis odio, sollicitudin sed, volutpat a, ornare ac, erat. Morbi quis dolor. Donec pellentesque, erat ac sagittis semper, nunc dui lobortis purus, quis congue purus metus ultricies tellus. Proin et quam. Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos hymenaeos. Praesent sapien turpis, fermentum vel, eleifend faucibus, vehicula eu, lacus.

2 Forcing a new line

Most of the time, you should not force a new line in LaTeX: you almost certainly want a new paragraph or to use `\parskip`, as we’ve just seen, to put a ‘blank line’ between paragraphs.

There are a few places where you use `\\` to start a new line without starting a new paragraph:

- At the end of table rows
- Inside the center environment
- In poetry (the verse environment)

Almost always, if you are not in one of those special places, you should not use `\\`.

3 Adding explicit space

We can insert a thin space (about half the normal thickness) using `\,`. In math mode, there are also other commands: `\.`, `\:` and `\;`, and one for a negative space: `\!`.

Very rarely, for example when creating a title page, you might need to add explicit horizontal or vertical space. We can use `\hspace` and `\vspace` for that.

4 Explicit text formatting

We wrote in lesson 3 that most of the time logical structure is preferable. But sometimes you want to make text bold, or italic, or monospaced, etc. There are two types of command for this: ones for short pieces of text, and ones for ‘running’ material.

For short bits of text, we use `\textbf`, `\textit`, `\textrm`, `\textsf`, `\texttt` and `\textsc`.

For running text, we use commands that alter the font setup; the commands here are for example `\bfseries` and `\itshape`. Because these don’t ‘stop’, we need to place them in a group if we want to prevent them from applying to the whole document. LaTeX environments are groups, as are table cells, or we can use `{...}` to make an explicit group.

```
\begin{document}
Normal text.
```

```
{\itshape
```

```
This text is italic.
```

```
So is this: the effect is not limited to a paragraph.
```

```
}
\end{document}
```

Normal text.

This text is italic.

So is this: the effect is not limited to a paragraph.

We can set font size in a similar way; these commands all work on an ongoing basis. The sizes we set are relative: `\huge`, `\large`, `\normalsize`, `\small` and `\footnotesize` are common. It's important to finish a paragraph before changing the font size back; see how we add an explicit `\par` (paragraph break) here.

```
\begin{center}
{\itshape\large Some text\par}
Normal text
{\bfseries\small Much smaller text\par}
\end{center}
```

Some text

Normal text **Much smaller text**