Module 9: Creating documents with LaTeX

Overview

LaTeX(`http://latex-project.org`) is a typesetting system for producing scientific and technical documents, that behaves like a programming language such as HTML.

Availability

LaTeXis available for free for all systems (`http://latex-project.org/ftp.html`) and can also be accessed through the cloud, for example by using `https://www.sharelatex.com`.

Help!

For comprehensive and accessible documentation, see `https://www.sharelatex.com/learn`

LaTeXhas *commands* for formatting and displaying text and *environments* that create blocks of texts (such as tables) that consist of pairs of tags

In any document, a command such as

```
\documentclass{article}
```

defines the class while the commands

```
\begin{document}
...
\end{document}
```

defines the environment that is the document.

Mathematical Notation

LaTeXmakes it very easy to use mathematical notation:

Command	Output
`\mu`	μ
`\sigma`	σ
`x^2`	x^2
`n_i`	n_i
`\frac{1}{2}`	$\frac{1}{2}$

Inline mathematical notation must be enclosed within $ signs.

In some cases, mathematical environments are created. For example,

```
\[
ax^2 + bx^2 + c = 0
\]
```

produces the output

$$ax^2 + bx^2 + c = 0$$

To number an equation, use an equation environment specified by

```
\begin{equation}
...
\end{equation}
```

Tables

In order to create the table

Name	Age
Joe	21
Amy	19
Bill	19

we use the LaTeXcode

```
\begin{center}
\begin{tabular}{c|c}
Name & Age\\\hline
Joe & 21\\
Amy & 19\\
Bill & 19\\
\end{tabular}
\end{center}
```