

# Reading 04: Generating Documents

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This document provides a basic overview of L<sup>A</sup>T<sub>E</sub>X.

## Documents

To denote the beginning and end of a **document**, you should do the following:

```
\documentclass[letterpaper]{article}
...
\begin{document}
...
\end{document}
```

## Packages

To import **Packages**, you should use the `usepackage` command after the `documentclass` command and before the `document` environment (ie. the *preamble*):

```
\usepackage{graphicx}
\usepackage{hyperref}
\usepackage[margin=1in]{geometry}
```

## Titles

To create a **Title**, add the following to your document's *preamble*:

```
\title{Reading 08: Document Tools}
\date{}
\author{Domer McDomerson}
```

Next, add the `maketitle` command to your `document` environment:

```
\begin{document}
\maketitle
...
```

## Sections

To create **Section Headers**, you use the following command:

```
\section{Overview}
```

To remove the leading number, append a \* after the `section` command name.

```
\section*[Overview]
```

## Styles

- To make text **Bold** use the code: {\bf text}.
- To make text *Italicized* use the code: {\it text}.
- To make text **Monospaced** use the code: {\tt text}.

## Verbatim

To show **Verbatim Blocks** of text such as:

```
#!/bin/sh

for argument in $@; do
    echo $argument
done
```

Use the **verbatim** environment:

```
\begin{verbatim}
#!/bin/sh

for argument in $@; do
    echo $argument
done
\end{verbatim}
```

To show a **Verbatim Blocks** of text inline, use the following code:

```
Here is \verb|Verbatim Blocks of Text|!
```

## Enumeration

To provide an **Enumeration** of items such as:

1. **First**: First enumeration.
2. **Second**: Second enumeration.
3. **Third**: Third enumeration.

Use the following code:

```
\begin{enumerate}
\item{\tt First}: First enumeration.
\item{\tt Second}: Second enumeration.
\item{\tt Third}: Third enumeration.
\end{enumerate}
```

## Itemization

To provide an **Itemization** of items such as:

- **First**: First itemization.
- **Second**: Second itemization.
- **Third**: Third itemize.

Use the following code:

```
\begin{itemize}
\item{\tt First}: First itemization.
\item{\tt Second}: Second itemization.
\item{\tt Third}: Third itemization.
\end{itemize}
```

## Table

To create a **Table** such as:

Column 1	Column 2	Column 3
Value 1,1	Value 1,2	Value 1,3
Value 2,1	Value 2,2	Value 2,3
Value 3,1	Value 3,2	Value 3,3
Value 4,1	Value 4,2	Value 4,3

Table 1: Example Tables

Use the following code:

```
\begin{table}[h!]
\centering
\begin{tabular}{r|l||c}
Column 1 & Column 2 & Column 3 \\
\hline
Value 1,1 & Value 1,2 & Value 1,3 \\
Value 2,1 & Value 2,2 & Value 2,3 \\
Value 3,1 & Value 3,2 & Value 3,3 \\
Value 4,1 & Value 4,2 & Value 4,3 \\
\end{tabular}
\caption{Example Tables}
\label{tbl:example}
\end{table}
```

## Figures

To include a **Figure** such as:

Use the following code:

```
\begin{figure}[h!]
\centering
\includegraphics[width=5in]{children.jpg}
\caption{Cuties}
\label{fig:cuties}
\end{figure}
```



Figure 1: Cuties

## References

To reference an internal **Figure** such as Figure 1 or **Table** such as Table 1 refer to the **label** using the **ref**.