Using LaTeX Packages

Extend Functionality

Martin

May 9, 2023

Install a Package

- Most packages are already installed on Linux and Mac
- For Ubuntu: `texlive-full` package provides all available packages
- On Windows with MiKTeX, packages are downloaded automatically when included in the document

Purpose of Packages

- Packages extend the functionality of LaTeX
- Different packages serve different purposes
- Explaining useful packages in the tutorials

Using/Including a Package

- To import a package, add \usepackage{PACKAGENAME} to the preamble
- Example code:

```
\documentclass{article}
\usepackage{PACKAGENAME}
\begin{document}
...
\end{document}
```

Math Typesetting with amsmath Package

- amsmath package provides math typesetting functionality
- Use the equation environment for math equations
- Automatic equation numbering
- Example code:

```
\documentclass{article}
\begin{document}
\begin{equation}
  f(x) = x^2
\end{equation}
\end{document}
```

- Output: $f(x) = x^2$ (1)

Removing Equation Numbers

- Sometimes it's necessary to remove equation numbers
- Use the `equation*` environment
- Include the `amsmath` package for this functionality
- Example code:

```
\documentclass{article}
\usepackage{amsmath}
\begin{document}
\begin{equation*}
  f(x) = x^2
\end{equation*}
\end{document}
```

- Output: $f(x) = x^2$

Conclusion

- Packages enhance LaTeX functionality
- Import packages using `\usepackage{PACKAGENAME}`
- Example package: `amsmath` for math typesetting
- Use `equation` environment for numbered equations
- Use `equation*` environment for equations without numbers