Week 1: Introduction to LaTeX and Typographical Principles

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Agenda

1. Introduction to LaTeX

2. Setting Up Overleaf Accounts

3. Basics of LaTeX Document Structure

4. Simple Text Formatting in LaTeX

5. Exercises and Practical Application

Introduction to LaTeX

- LaTeX is a typesetting system for technical and scientific documents.
- Focuses on content rather than formatting.
- Automates numbering, tables of contents, and equation formatting.

Benefits of Using LaTeX

- High-Quality Typesetting
- Mathematical Notation
- Cross-Referencing
- Consistency and Reproducibility

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LaTeX Usage Across Fields

- Mathematics: Equation formatting capabilities.
- Computer Science: Technical reports, documentation.
- Linguistics: Typesetting linguistic analyses.

Setting Up Overleaf Accounts

- Overleaf: Online LaTeX editor for collaboration.
- Account Creation: Visit `https://www.overleaf.com/`
- Overleaf Pro `https://www.fi.muni.cz/tech/overleaf.html`
- Benefits:
  - Real-Time Collaboration
  - Version Control
  - Access to Templates

Basics of LaTeX Document Structure

The document is divided into:

- Preamble: Document settings and configurations.
- Document Environment: The content of your document.
- See Example 1

Typographical Principles

Considerations for document design:

- Font Selection: Serif vs. Sans-serif
- Font Size: Headings vs. Body text
- Line Spacing: Readability
- Margins: White space balance

Basic Text Formatting Commands

Formatting commands include:

```
% Document margins, in preambule
\usepackage[margin=1in]{geometry}
\textbf{Bold Text},
\textit{Italic Text},
\underline{Underlined Text}
% Font size and line spacing
\fontsize{12pt}{14pt}\selectfont
% Paragraph indentation
\setlength{\parindent}{0pt}
% Set line spacing to 1.5
\linespread{1.5}
```

Exercise: Apply Text Formatting

Task 1

Apply bold, italic, and underline to specific parts of a given text. Adjust font size, line spacing, and margins.

Clarification and Guidance on Common Formatting Issues

- Adjusting Line Spacing
- Changing Font Styles
- Modifying Margins

Tips and Best Practices

- Use Templates
- Proofread for Formatting Errors
- Leverage LaTeX Packages for Advanced Formatting Needs

Exercise: Fix Formatting

Task 2

Correct the formatting errors using LaTeX commands.Experiment with different font styles and sizes to familiarize yourself with LaTeX's capabilities.

Conclusion and QA

- Recap of LaTeX basics and typographical principles.
- Open floor for any questions or clarifications.