DEPARTMENT OF COMPUTER SCIENCE
GAUHATI UNIVERSITY

Seminar Report

LaTeX Seminar Report Title

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Declaration by Supervisor

Progress of **Author Name** in the project titled **LaTeX Seminar Report Title** is satisfactory/ unsatisfactory.

(Your Supervisor's Name)
Supervisor
Supervisor Designation

Declaration by Student

I, **Author Name** hereby declare that the project titled **LaTeX Seminar Report Title** is my own work and it has not been copied from anywhere.

(Author Name)

Abstract

   This seminar report serves as a comprehensive guide to using LaTeX, a powerful typesetting system widely utilized for document preparation in diverse academic and professional domains. Exploring its versatility, the report delineates fundamental principles, elucidates intricate functionalities, and offers practical examples to illustrate various LaTeX components. From structuring documents to incorporating mathematical equations, tables, and graphical elements, this guide provides detailed insights into leveraging LaTeX's robust features effectively. Aimed at both beginners and experienced users, this report strives to facilitate a deeper understanding and seamless utilization of LaTeX for producing sophisticated and visually appealing documents.

Contents

1 Introduction on how to use this template

LaTeX is a typesetting system commonly used for producing high-quality documents, including research papers, reports, and presentations. It offers several advantages over traditional word processors. In this seminar, we'll explore some essential LaTeX components.

This is a practical guide into how to use this template, by explaining the role of the different folders and files.

If some practices seem like overkill for a 20 page proposal (splitting the content across different files), that is because it probably is, but we built it this way because this thesis template is structured identically. That means that you will be able to incorporate this document into your thesis seamlessly. [**?**]

2 Template Structure

2.1 Folder Setup

The main folder contains three folders detailed here:

- **Assets.** This folder should contain all the images that you will use in your thesis. It can contain subfolders, for example one for each chapter. To include an image from the main text, use something like `\includegraphics{subfolder/image.jpg}` without worrying about the `Images` path.

- **MainText.** This folder contains a series of LaTeX files that form the main text: introduction, chapters, conclusion, appendices and published articles. The introduction and conclusion as they are now are not numbered, which creates a few difficulties with the headers of the thesis. Those are solved by including the commands `\unnumberedchapter{}` and `\numberedchapter` before including the files in `xxx_Thesis.tex`. If you want the introduction and conclusion to be numbered, re-write and treat them as regular chapters.

- **Preamble.** This folder contains a series of LaTeX files with the pages that will appear before the main text. These files are mainly for the final dissertation. Do not modify them for unless neccessary. The files are:

  - `abstract.tex` — Abstract. Follow directions in the file.
  - `appendix.tex` — Appendices(optional).
  - `glossary.tex` — Glossary (optional). If the list goes over one page, create another table.
  - `apa.bst` — Bibliography style file modified to suit this thesis. If you want to use another custom bibliography style, include the file in this folder.
  - `Thesis_bibliography.bib` — BibTeX file containing your bibliography.
  - `report_bib.bib` — BibTeX file containing your bibliography for reports.

2.2 `Report.tex`

This is the main file, the only one that need to be compiled to build the document. Compile once with LaTeX, once with BibTeX and finally twice with LaTeX to get all the references right.

Let's go through each section and comment them briefly. [1] The last section will emphasize the differences between the two files.[2]

2.3 Differences between a report version and final version

There are two main differences between `\documentclass[report]{dd_dissertation}` and `\documentclass[final]{dd_dissertation}`.

The difference is in the document style: page size, header and line spacing are different This might create small issues, such as page breaking with large tables, images or captions, when compiling the same content.

3 Document Structure

3.1 Title, Author, and Date

To set the title, author, and date, change the `title`, `author`, and `date` commands:

```
\title{\LaTeX\ Seminar Report Title} % Title of the thesis
\author{Author Name} % Author Name
\authordesignation{PS-XxX-xXx-XXXX}% Author designation
\degree{COMPUTER SCIENCE} % Degree Name
\date{\today}
\supervisor{Your Guide's Name}
\supervisordesignation{Guide's Designation}
```

4 Text Formatting

4.1 Sections and Subsections

Divide your document into sections and subsections using the `section` and `subsection` commands:

```
\section{Introduction}
\subsection{Document Class}
```

4.2 Emphasis

Use `emphasized text` for emphasizing text and **bold text** for making text bold.

5 Lists, Figures, Tables and Codes

5.1 Lists

5.1.1 Unordered Lists

Create bullet-point lists using the `itemize` environment:
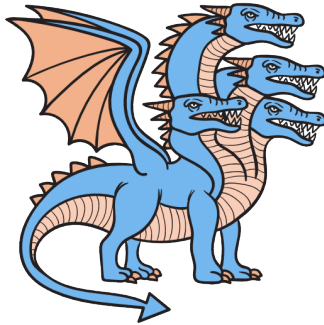
- Item 1

- Item 2

5.1.2 Ordered Lists

Create numbered lists using the `enumerate` environment:

1. First item

2. Second item

5.2 Figures

Insert figures using the `figure` environment:

Figure 1: A sample figure.

Refer to figure like this: Figure 1 or this (Fig. 1).

5.3 Tables

Table 1: Short heading above the table.

Parameter	Value
Δ	0, 150
α	85
ϵ	6
κ	6.8
γ	0.2

Full caption with all the details here.

Parameter	Value
Δ	0, 1500
α	850
ϵ	60
κ	68
γ	2

Table 2: This is how tables are created

Refer to tables this this: Table 1.

5.4 Codes

$$x := -2 + y$$

Listing 1: My Captions

```
int main() {
    //compound statement #1
    int a = 1;
    {
        //compound statement #2
        a = 2;
            if (a) {
                //compound statement #3
                a = 4;
            }
    }
}
```

Listing 2: caption text

For indented code insertion we can do it like this.

```java
// Hello.java
import javax.swing.JApplet;
import java.awt.Graphics;

public class Hello extends JApplet {
    public void paintComponent(Graphics g) {
        g.drawString("Hello, world!", 65, 95);
    }
}
```

6   References

Cite references using the `cite` command:

```
According to \cite{author2022}, LaTeX is powerful.
```

7   Conclusion

This seminar report provides a brief introduction to LaTeX and some of its essential components. Experiment with LaTeX to create beautiful documents.

References

[1] A. W. Appel. *Modern Compiler Implementation in ML.* Cambridge University Press, 1988.

[2] J. Lee. Ansi c grammar, April 30, 1985. URL `https://www.lysator.liu.se/c/ ANSI-C-grammar-l.html`.