

Latex Template for Minor Project Report Writing

A Minor Project Report
Submitted in partial fulfillment of the requirements for the degree of
Bachelor of Technology
in
Electronics and Communication Engineering

by

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28 April 2020

Dedicated to ...

Certificate

**Department of Electronics and Communication Engineering
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It is certified that the work contained in the project report entitled “Latex Template for Minor Project Report Writing” by the following students (Group ID: MNP17XX) has been carried out under my/our supervision and that this work has not been submitted elsewhere for a degree.

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This project report entitled “Latex Template for Minor Project Report Writing” submitted by the group MNP17XX is approved for the degree of Bachelor of Technology. The viva-voce examination has been held on _____.

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Declaration

Date: 28 April 2020

I/We declare that this written submission represents my/our ideas in my/our own words and where others' ideas or words have been included, I/We have adequately cited and referenced the original sources. I/We declare that I/We have properly and accurately acknowledged all sources used in the production of this report. I/We also declare that I/We have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in my submission. I/We understand that any violation of the above will be a cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

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Abstract

This document contains essential templates required to write technical reports using \LaTeX . Particularly it shows how to create an equation, figure, table, symbols list, and bibliographic citation in a \LaTeX document. The Abstract in the report, however, shall have two more parts, namely, the layout of the thesis giving a brief chapter wise description of the work and the key words.

Keywords: \LaTeX , Report, Template.

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Chapter 1

Introduction

This document contains commonly used essential templates to write a \LaTeX document. This document is to be used along with the files and folders provided. Writing a \LaTeX document is very simple. Often students need only very simple constructs. This document shows certain essential features that almost all technical report writing requires. Please consult the PDF file for the output of the document, and then look at the corresponding \LaTeX file to reproduce it. The document illustrates the following constructs

- Unnumbered and numbered Lists
- Equations
- Defining short macros for frequently used symbols
- Bibliography
- Figures
- Tables

The normal procedure for compiling a \LaTeX document that contains bibliographic entries is to follow the following steps

1. `pdflatex mainrep`
2. `bibtex mainrep`
3. `pdflatex mainrep`

In the above example `mainrep` is the main \LaTeX file.

In the preliminary pages, A blank page is inserted.¹

¹A blank page may be inserted after the cover page when using the `twoside` (duplex printing) option so that the beginning of the paper does not appear on the back side of the cover page.

1.1 First section of this chapter

This is the first chapter, which resides in a directory (folder) `intro`. Each chapter can contain `section`, `subsection` and so on.

1.1.1 Equations and Math symbols

Equations should be set in a separate mode. For details on getting various types of aligned equations, consult the $\mathcal{A}\mathcal{M}\mathcal{S}$ - $\mathcal{L}\mathcal{A}\mathcal{T}\mathcal{E}\mathcal{X}$ documentation `amsl.doc.pdf`. Simple equations are set as

$$\int dx \cos x = \sin x \quad (1.1)$$

Equation (1.1) is the integral of the cosine function. Mathematical symbols must always be put inside `$$`, when they appear outside a math environment (such as `equation`, `align`, `gather`, etc). The symbol “ex” must be written as `x` and not as `x`.

Another commonly used construct for equations is the `align` environment to align several equations along a vertical line. It is usually the `=` sign across which the alignment is done. The point of alignment for each equation is specified using the ampersand symbol

$$a = b \quad (1.2)$$

$$a + e + f + g = m + n + z \quad (1.3)$$

$$x + 2 = x^3 + 3x^2 + 2x + 5 \quad (1.4)$$

1.1.2 Commonly used Symbols

For mathematical symbols it is very convenient to define frequently used symbols as a short macro. For example if you are to be using the symbol η_s frequently it is convenient to define it in as:

```
\newcommand{\etas}{\ensuremath{\eta_{\mathrm{s}}}}
```

in the preamble and to simply refer it to in the text as η_s or in a mathematical equation as $\eta_s = \eta(1 + \phi)$.

1.2 Second section of this chapter

Chapter 2

Literature Survey

The bibliographic entries are to be kept in a file named `<something>.bib`. In this sample report we call it as `mylit.bib`. This file must be included without the `.bib` extension in the main file as: `\bibliography{mylit}`. Open the file `mylit.bib` to see the format in which the entries are written. This is written in the Bib_TE_Xformat. Most of the bibliographic web pages (Scopus, ISI Web) and software (EndNote, etc) allow you to export bibliographic entries in the Bib_TE_Xformat.

Items with same author is shown in

An article [1]

A book [2]

A series [3]

Someone's thesis [4]

Some technical report [5]

A collection [6]

Visited website [7]

Accepted for publication [8]

Submitted for publication [9]

Not published [10]

Conversation [11]

Chapter 3

Materials and Methods

3.1 Including Figures

Figures are conveniently included using postscript format. If you are generating a figure in a software, please check if the software supports writing to a postscript or a PDF format. This format is loss less vector format and with reproduce in any magnification without any pixelation. Make sure to write it to an “Encapsulated Post-script” or .eps format.

Figures should be given a label and which can be used to refer to them in the running text using `\ref{}` command. Figure 3.1 describes the process flow sheet of the experimental set up used in this report. The Figure 3.1 can also be referred by a short form notation a pre-defined macro `\Figref`.

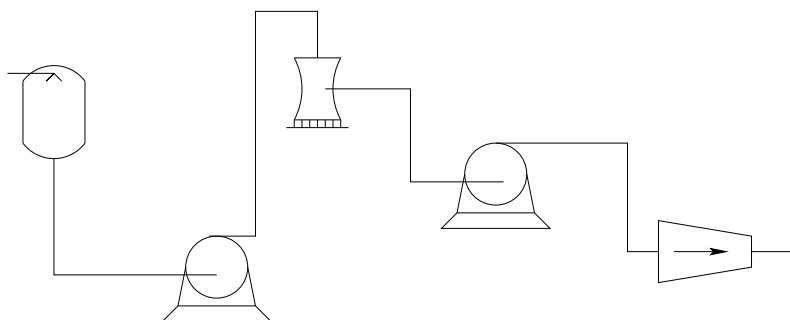


Figure 3.1: Process flow sheet of the experimental setup. The caption of the figure goes here. A shorter caption can be written in square brackets to identify it in the list of figures.

Chapter 4

Results and Discussions

4.1 Including Tables

Tables are to be used in a special environment so that they have a Number, caption and appear in the list of tables. Table 4.1 is a sample table. In the case of tables, it is a convention to write the caption above the table. Note that in the case of figures the caption appears below the figure.

Table 4.1: Physical properties of the materials used.

Property	Value
Particle Density, ρ_p	2500 kg/m ³
Viscosity, η_s	1×10^{-3} Pa-s

Appendix A

Appendix

References

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