Hands-on with LaTeXfor Research scholars Department of Information Science and Technology CEG Campus, Anna University

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Contents

Abstract

This tutorial will give you a headstart with Latex.

1 Introduction

This is the start of the tutorial. We will document this sessions with many paragraphs and sections. First let us put an overview of whatever we have in our mind for this documentation by including sections, which will be visible in Table of Contents.

2 Sections, Subsections

To add section use ``\section'' and subsections ``\subsection". Let us add some sections and subsections now.

2.1 Adjusting margin sizes

First, add the package ``\usepackage[margin=1in]geometry", to indicate 1in margin on all sides.

3 Packages

Always add packages at the preamble using the command "usepackage". If the package is not available, copy the .sty file in your directory and then add those.

4 Itemize and Enumerate

We can add bullet points using `itemize` and `enumerate`.

- One
- Two
- Three

1. Point one
2. Point two
3. Point three

5 Tables

Let us include a small table with 3 rows and 4 columns in Table 1. You may have to add the package "array" for fixed length columns. For more on tables visit `https://www.sharelatex.com/learn/Tables`.

Table 1: The first table in Document

Column1	Column2	Column3	Column4
11	12	13	14
21	22	23	24
31	32	33	34

6 Images

To add pictures, use the package "graphicx" (see in the preamble). Include the path of the picture in `\includegraphics` and place within "begin" and "end figure". This would display the figure as shown in 1.

Figure 1: The first figure

7 Math Equations

Latex is friendly with mathematical equations. Let us try a few samples. But before that include the package `amsmath`. Try Equation 1 and Equation 2 now.

$$\frac{\frac{1}{x}+\frac{1}{y}}{y-z} \tag{1}$$

$$(\varphi \wedge \psi) \leftrightarrow \alpha \tag{2}$$

Then try this matrix representation.

$$M = \begin{bmatrix} a_{00} & b_{01} & c_{02} \\ a_{10} & b_{11} & c_{12} \\ a_{20} & b_{21} & c_{22} \end{bmatrix}$$

8 Citing References

Refer to the material on LaTeX[1]. One example of the added reference is Einstein's work [2] and another on typesetting [3].

References

[1] Michel Goossens, Frank Mittelbach, and Alexander Samarin. *The LaTeX Companion*. Addison-Wesley, Reading, Massachusetts, 1993.

[2] Albert Einstein. *Zur Elektrodynamik bewegter Körper*. (German) [*On the electrodynamics of moving bodies*]. Annalen der Physik, 322(10):891–921, 1905.

[3] Knuth: Computers and Typesetting,
`http://www-cs-faculty.stanford.edu/~uno/abcde.html`