

Assignment: Introduction to LaTeX

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1 Introduction

LaTeX is a typesetting system widely used for creating documents in scientific and technical fields. It allows precise control over document structure, making it ideal for complex documents with mathematical equations, tables, and figures. Unlike traditional word processors, LaTeX is more flexible and produces high-quality, publication-ready documents.

2 Instructions Specific to You

ASCII Sequence of Your Name

The ASCII sequence of "Muhammad Musawar Ali Shah" is:

77 117 104 97 109 109 97 100 32 77 117 115 97 119 97 114 32 65 108 105 32 83 104 97 104

Registration Number

Here are custom symbols for my initials:

\mathcal{M} S

3 Equations

3.1 The quadratic Equation

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \quad (1)$$

3.2 A summation formula for the sum of first n positive integers

$$S = \sum_{k=1}^n k = \frac{n(n+1)}{2} \quad (2)$$

ASCII Code

$$M = 77 \quad U = 117 \quad S = 115 \quad A = 97 \quad W = 119 \quad A = 97 \quad R = 114 \quad (3)$$

4 Tables

Table 1: Comparison between LaTeX and word processor

Feature	LaTeX	Word Processor
Document control	High control over layout and formatting	Limiting, WYSIWYG approach
Equation formatting	Specialized packages for complex equations	Limited support for equations
Output Quality	Publication-ready	Variable quality

5 References

1. LaTeX Beginners Guide: $u = 117, a = 97, a = 97$
2. Online tutorial: LaTeX for Students – A Simple Quickstart Guide
3. Learn LaTeX Tutorial (1): Basic Compiling, Titles, Sections, Formatting and Syntax