

A Sample L^AT_EX Article

Ada Example

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Free sample from 99helpers.com/file-types/tex

Abstract

This article is a sample L^AT_EX source file. It shows the parts most documents use: sections, mathematics, a table, a figure drawn with TikZ, cross-references and a bibliography. Read the source next to the PDF to see which commands produced what.

1 Introduction

T_EX was written by Donald Knuth to typeset mathematics well [1]. L^AT_EX adds commands for structure, so authors mark up *what* each part is and the class decides how it looks [2]. Section 2 shows some mathematics, Table 1 compares engines and Figure 1 shows the build cycle.

2 Mathematics

Inline maths sits in the text, like $e^{i\pi} + 1 = 0$ or $\sum_{k=1}^n k = \frac{n(n+1)}{2}$. Displayed equations get a number:

$$\int_{-\infty}^{\infty} e^{-x^2} dx = \sqrt{\pi}. \quad (1)$$

The `align` environment lines up several equations at the `&`:

$$(a + b)^2 = a^2 + 2ab + b^2, \quad (2)$$

$$\nabla \cdot \mathbf{E} = \frac{\rho}{\varepsilon_0}. \quad (3)$$

Equation (1) is the Gaussian integral; (2) expands a square.

3 A table

Table 1: Three common T_EX engines

Engine	Output	Fonts
pdfT _E X	PDF	Type 1, 8-bit encodings
XeT _E X	PDF	System OpenType and TrueType, Unicode
LuaT _E X	PDF	OpenType, Unicode, scriptable in Lua

4 A figure

Figure 1 has no image file: it is drawn by TikZ commands in the source, so it stays sharp at any zoom.

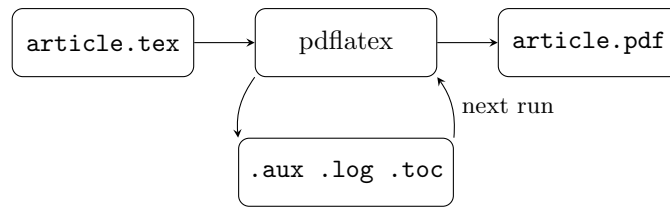


Figure 1: The build cycle: each run writes auxiliary files that the next run reads.

5 Building this file

Run `pdflatex` twice. The first run writes labels and citations to `sample-article.aux`; the second reads them back, which is how Section 1 and page 2 get their numbers.

References

- [1] Donald E. Knuth. *The $T_E X$ book*. Addison-Wesley, 1984.
- [2] Leslie Lamport. *L^AT_EX: A Document Preparation System*. 2nd edition, Addison-Wesley, 1994.