RuTeX

A Rust implementation of the TeX typesetting system

Timo Barnard (timo@onerockaudio.co.za)

January 17, 2025

1 Introduction

TeX is a typesetting system designed by Donald Knuth in 1978. It is widely used in academia and the scientific community for the production of high-quality documents. The system is based on the idea of separating content from presentation, allowing authors to focus on the content of their documents while the system takes care of the formatting.

1.1 Motivation

The original TeX system was written in the Pascal (WEB) programming language making it difficult to maintain and extend. The goal of this project is to rewrite the TeX system in the Rust programming language, which is known for its safety and performance. The project will be implemented in stages, starting with a basic parser and macro expansion engine.