

编译原理实践第 11 次课

(基于 PLY 的 LaTeX 解析)

1. 利用 PLY 实现 Latex 文本的解析

(1) 示例程序位于 `example/`

(2) 需要进行解析的文件为 **`example2.tex`**

(3) 需要完成以下标记的解析

`\begin{document}...\end{document}`

`\title`

`\author`

`abstract`

`\section`

`\subsection`

`itemize`

`item`

(4) 解析结果以语法树的形式呈现，类似下图的形式

```
C:\Windows\system32\cmd.exe

C:\Users\zhongqing\Desktop\第11次课\example>python latex_parse.py
+ [DOC]
+ [CONTENT]
+ [TITLE]
+ How to Structure a Latex Document
+ [ABSTRACT]
+ In this article, I shall discuss some of the fundamental topics in producing a structured document. This document itself does not go into much depth, but is instead the output of an example of how to implement structure. Its Latex source, when in used with my tutorial provides all the relevant information.
+ [SECTIONS]
+ [SECTIONS]
+ [SECTIONS]
+ [SECTION](Introduction)
+ This small document is designed to illustrate how easy it is to create a well structured document within Latex. You should quickly be able to see how the article looks very professional, despite the content being far from academic. Titles, section headings, justified text, text formatting etc., is all there, and you would be surprised when you see just how little markup was required to get this output.
+ [SECTION](Structure)
+ One of the great advantages of latex is that all it needs to know is the structure of a document, and then it will take care of the layout and presentation itself. So, here we shall begin looking at how exactly you tell latex what it needs to know about your document.
+ [SECTION](Top Matter)
+ The first thing you normally have is a title of the document, as well as information about the author and date of publication. In latex terms, this is all generally referred to as top matter.

C:\Users\zhongqing\Desktop\第11次课\example>
```

(5) 将 LaTeX 解析的结果构建为 pyfPDF 能够识别格式比如 HTML，并通过 pyfPDF 生成 pdf

(6) 完成实验报告并提交

一、实验目的

二、实验内容

三、实验步骤和结果

四、实验总结