

# Lexer Compiler

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Introduction to Language Theory and Compiling

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## **Abstract**

This project involves designing a compiler for the Genial Imperative Language for Learning and the Enlightenment of Students (GILLES). The grammar of the language is defined, with reserved keywords, program names, variable names, and numerical constants specified through lexical rules. Program names start with uppercase letters, while variable names begin with lowercase letters, both being case-sensitive. Integral numerical constants consist solely of digits. GILLES supports two types of comments: short comments starting with the dollar sign (\$) and long comments enclosed by double exclamation marks (!!). These comments are ignored by the scanner and are not transmitted to the parser.

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# Chapter 1

## Introduction

### 1.1 Background

Provide the background of the report here.

### 1.2 Objective

State the main objectives of your work.

### 1.3 Structure of the Report

Briefly outline the structure of your report.

# Chapter 2

## Literature Review

Discuss relevant research and literature related to your topic.

# Chapter 3

## Methodology

Explain the methods and tools you used in your research or project.



# Chapter 4

## Results

Present the results or findings from your work.

# Chapter 5

## Discussion

Interpret the results and compare them with previous work.

# Chapter 6

## Conclusion

Summarize the key points of your report and discuss possible future work.

# References

# Appendix A

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Include supplementary material like raw data or additional figures.