## MiniLang Compiler

An Overview of Design and Implementation

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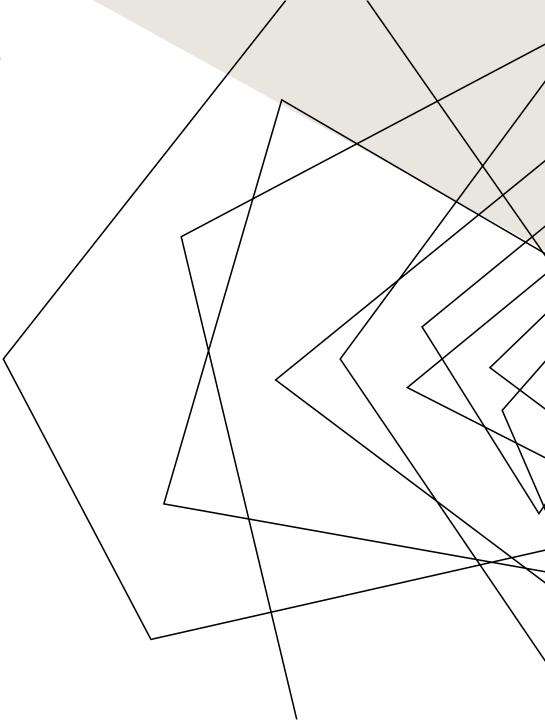
# STRUCTURE OF THE MINILANG COMPILER

### **Main Components:**

• Lexer: Converts source code into tokens.

 Parser: Builds an Abstract Syntax Tree (AST) from tokens.

• Code Generator: Produces assembly code from the AST.



### CHALLENGES AND SOLUTIONS

- Handling complex language features.
- Managing memory efficiently.
- Ensuring error-free parsing and code generation.
- Solutions implemented:
- Robust error handling.
- Efficient data structures for symbol tables.
- Clear modular design.

