**Compiler Construction Project**

Language Description:

Dictionary is a very useful structure. It deals with key value pairs and the main feature of it is its efficiency and ease of syntax. However, Java does not support python like dictionary structure. The language we will make will facilitate a Python-like dictionary syntax for Java developers, allowing them to write code with the simplicity of Python's dictionaries which is then automatically translated to Java's HashMap structures.

Implementation Details:

Utilizing ANTLR, the compiler consists of a Lexer for tokenization and a parser for constructing parse trees from the code, which is then converted into Java syntax.

Scope:

Initially focused on dictionary handling, it has the potential to encompass broader Python features, offering Java developers a Pythonic way to manage data structures within Java applications.

Applications:

Ideal for Java developers seeking Python's syntactic elegance for data manipulation, this language could eventually be integrated into Java projects, enabling sections of code to be written in a more Pythonic way while compiling to Java.