

Languages and Compilers

CMPN403

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Description automatically generated

**simple c++ programming language using lex & yacc**

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**Team #2 Members**

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# **project overview**

The purpose of this project is to develop a simple C++ programming language by utilizing the Lex and Yacc tools. The project aims to provide hands-on experience in building a compiler, starting from lexical analysis to syntactic analysis and code generation. The resulting programming language will support a subset of the C++ language syntax and provide basic compilation capabilities.

# **tools and technologies used**

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| --- | --- |
| Components | Tools |
| Lexer | Flex |
| Parser | Bison |
| Symbol Table & Quadruples | C++ |
| GUI | Python |

# **tokens**

|  |  |
| --- | --- |
| Tokens | Description |
| IF, ELSE, WHILE, FOR, REPEAT, UNTIL, SWITCH, CASE, DEFAULT, BREAK, RETURN, ENUM, EXIT | Keywords |
| INT, FLOAT, CHAR, STRING, BOOL, CONST, VOID | Data Types |
| BOOL\_TRUE, BOOL\_FALSE | Boolean Constants |
| AND, OR, NOT | Logical Operators |
| EQ, NEQ, LT, GT, LEQ, GEQ | Comparators |
| ASSIGN, ADD, SUB, MUL, DIV, MOD, INC, DEC | Arithmetic Operators |