



UNIVERSIDAD NACIONAL AUTÓNOMA DE MÉXICO

FACULTAD DE INGENIERÍA

Proyecto

Analizador Léxico con FLEX

SEMESTRE 2019-2

**LENGUAJES FORMALES Y
AUTÓMATAS**

P R E S E N T A

Murrieta Villegas Alfonso

Cárdenas Cárdenas Jorge



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BNF DEL LENGUAJE C

δ : {

1. declarationList \rightarrow declarationList declaration | declaration
 2. declaration \rightarrow varDeclaration | funDeclaration
 3. varDeclaration \rightarrow typeSpecifier varDeclList;
 4. varDeclList \rightarrow varDeclList, simpleExpression | simpleExpression
 5. typeSpecifier \rightarrow int | bool | char
 6. funDeclaration \rightarrow typeSpecifier (params) statement | (params) statement
 7. params \rightarrow params; paramTypeList | paramTypeList
 8. paramTypeList \rightarrow typeSpecifier
 9. statement \rightarrow selectionStmt | iterationStmt | returnStmt | breakStmt
 10. statementList \rightarrow statementList statement
 11. selectionStmt \rightarrow if (simpleExpression) statement | if (simpleExpression) statement else statement
 12. iterationStmt \rightarrow while (simpleExpression) statement
 13. returnStmt \rightarrow return;
 14. breakStmt \rightarrow break;
 15. expression \rightarrow letters simpleExpression | letters | simpleExpression
 16. simpleExpression \rightarrow sumExpression relop sumExpression | sumExpression | expression
 17. relop \rightarrow <= | < | > | >= | == | !=
 18. sumExpression \rightarrow sumExpression sumop term | term
 19. sumop \rightarrow + | -
 20. term \rightarrow * | / | %
 21. letters \rightarrow a, b, c, ..., z
- }

Elementos del lenguaje:

NT: {declarationList, declaration, varDeclaration, funDeclaration, varDeclList, typeSpecifier, simpleExpression, params, paramTypeList, statement, compoundStmt, localDeclarations, statementList, selectionStmt, iterationStmt, returnStmt, breakStmt, expression, simpleExpression, relop, sumExpression, sumop, term, letters}

T: { a, b, c, ..., z, +, -, *, /, %, <=, <, >, >=, ==, !=, return, break, while, if, int, bool, char }

S: {declarationList }

F: {letters, term, sumop, relop, returnStmt, breakStmt, typeSpecifier }