

**Lab Terminal**

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Compiler Construction [Lab]

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### Q2: **Explain 2 code functions of your mini compiler.**

1. ***Tokenization (Lexical Analysis):***

int isKeyword(char \*word) {

    char \*keywords[] = {"int", "float", "return", "if", "else"};

    for (int i = 0; i < sizeof(keywords) / sizeof(keywords[0]); i++) {

        if (strcmp(word, keywords[i]) == 0) return 1;

    }

    return 0;

}

· **Purpose**: Identifies whether a given string is a C keyword.

· **Usage**: Used in lexical analysis to classify tokens.

1. ***Symbol Table Management:***

void addSymbol(char \*name, char \*type) {

    struct Symbol newSymbol;

    strcpy(newSymbol.name, name);

    strcpy(newSymbol.type, type);

    symbolTable[symbolCount++] = newSymbol;

}

· **Purpose**: Adds variables, functions, or other entities to the symbol table.

· **Usage**: Ensures declarations are stored and validated during semantic analysis.