COMSATS University Islamabad,

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**Subject:** Compiler Construction

**Lab Terminal**

**Q2 :- Explain two code functions of your mini compiler.**

**Lexical Analysis Function**

Splits the source code into tokens based on predefined patterns.

Ignores whitespace but identifies unknown characters.

**Purpose:**

Lexical analysis, or scanning, is the process of breaking the source code into atomic components called tokens. These tokens are passed to the Syntax Analysis phase.

**Syntax Analysis Function**

Checks if the token sequence follows valid grammar rules.

For simplicity, assumes a basic assignment statement grammar.

**Purpose:**

Syntax analysis, also known as parsing, ensures that the input source code adheres to the grammar rules of the programming language. This phase takes tokens generated by the lexical analysis phase and organizes them into a hierarchical structure called the Abstract Syntax Tree (AST).