Oyebade Rotimi
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CSC 312
Assignment

Lexeme - A lexeme is a sequence of characters in the source program that matches the pattern for a token and is identified by the lexical analyzer as an instance of that token.
Token - Token is a pair consisting of a token name and an optional token value. The token name is a category of a lexical unit.Common token names are

- identifiers: names the programmer chooses
- keywords: names already in the programming language
- separators (also known as punctuators): punctuation characters and paired-delimiters
- operators: symbols that operate on arguments and produce results

- literals: numeric, logical, textual, reference literals

Consider this expression in the programming language C:
sum = 3 + 2;
Tokenized and represented by the following table:

Lexeme	Token category
sum	Identifier
=	Assignment operator
3	Integer literal
+	Addition operator
2	Integer literal
;	End of statement

Shortly put:

- Lexemes are the words derived from the character input stream.
- Tokens are lexemes mapped into a token-name and an attribute-value.

An example includes:
x = a + b * 2
Which yields the lexemes: {x, =, a,

+, b, *, 2}
With corresponding tokens: {<**id**, 0>, <=>, <**id**, 1>, <+>, <**id**, 2>, <*>, <**id**, 3>}