

Agboola Abiola

17/sci011007

Computer Science

CSC312.

Assignment:

Differentiate between lexemes and tokens. Give examples to support your discussion.

Answer

Lexemes

Tokens

- | | |
|---|---|
| 1. A lexeme is a sequence of character in the source program that matches the pattern for a token and is identified by the lexical analyzer as an instance of that token. | A token is a pair consisting of a token name and an optional attribute value. The token name is an abstract symbol representing a kind of lexical unit eg a particular keyword e.t.c. |
| 2. Lexemes takes the input of character/symbol and using the rules of the lexer convert the input character/symbol into token. | Token is a programming structure used by the parser that has a property called lexemes that hold the character/symbol from the input. |
| 3. Lexemes are the words derived from the character input stream. | Token are lexemes mapped into a token-name and an attribute-value. |

Examples

Lexemes

Tokens

① identifier: x, cont, names e.t.c.

① identifier: chosen name by the programmer

② Integer: 345, 20-12 e.t.c.

② keywords

③ operators

④ operators