

컴파일러개론 2015. quiz#2 (10/7)

다음 문법에 대해

- FOLLOW를 구하여, 반드시 손으로 풀어서, 10/8(목) 17:59:59까지 공5502호로 제출하시오.
(FIRST에 대한 답은 금일 1시에 e-learn 사이트에 공지되니 참고할 것)

$S \rightarrow \varepsilon$

$S \rightarrow XS$

$B \rightarrow \backslash \text{begin} \{ \text{word} \}$

$E \rightarrow \backslash \text{end} \{ \text{word} \}$

$X \rightarrow B S E$

$X \rightarrow \{ S \}$

$X \rightarrow \text{word}$

$X \rightarrow \text{begin}$

$X \rightarrow \text{end}$

$X \rightarrow \backslash \text{word}$

단, S, B, E, X 가 non terminal이고,

\backslash , begin, word, end, {, }가 token (terminal symbol) 이다.

$$\text{Follow}(S) = \{\$, \} \cup \{\} \cup \text{First}(E) = \{\$, \}, \backslash\}$$

$$\text{Follow}(B) = \text{First}(S) \oplus \text{First}(E) = \{\{, \text{word}, \text{begin}, \text{end}, \backslash\}$$

$$\text{Follow}(X) = \text{First}(S) - \{\epsilon\} = \{\{, \text{word}, \text{begin}, \text{end}, \backslash\}$$

$$\text{Follow}(E) = \{\}$$

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식

$$\text{Follow}(X) = \text{Follow}(X) \cup \text{Follow}(S)$$

$$\text{Follow}(E) = \text{Follow}(E) \cup \text{Follow}(X)$$

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(1)

$$\text{Follow}(X) = \{\{, \text{word}, \text{begin}, \text{end}, \backslash\} \cup \{\$, \}, \backslash\} = \{\{, \text{word}, \text{begin}, \text{end}, \backslash, \$, \}$$

$$\text{Follow}(E) = \{\} \cup \{\{, \text{word}, \text{begin}, \text{end}, \backslash\} = \{\{, \text{word}, \text{begin}, \text{end}, \backslash\}$$

(2)

$$\text{Follow}(X) = \{\{, \text{word}, \text{begin}, \text{end}, \backslash, \$, \} \cup \{\$, \}, \backslash\} = \{\{, \text{word}, \text{begin}, \text{end}, \backslash, \$, \}$$

$$\text{Follow}(E) = \{\{, \text{word}, \text{begin}, \text{end}, \backslash\} \cup \{\{, \text{word}, \text{begin}, \text{end}, \backslash, \$, \} \} = \{\{, \text{word}, \text{begin}, \text{end}, \backslash, \$, \}$$

(3)

$$\text{Follow}(X) = \{\{, \text{word}, \text{begin}, \text{end}, \backslash, \$, \} \cup \{\$, \}, \backslash\} = \{\{, \text{word}, \text{begin}, \text{end}, \backslash, \$, \}$$

$$\text{Follow}(E) = \{\{, \text{word}, \text{begin}, \text{end}, \backslash, \$, \} \cup \{\{, \text{word}, \text{begin}, \text{end}, \backslash, \$, \} \} = \{\{, \text{word}, \text{begin}, \text{end}, \backslash, \$, \}$$