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Actividad 3.3 Practicando los lenguajes libres de contexto

4.1

a)

a: The set of palindromes (strings that read the same forward as backward) over alphabet $\{a,b\}$

$$S \rightarrow aSa \mid bSb \mid a \mid b \mid \epsilon$$

c) Set of all strings in alphabet $\{a, b\}$ with twice as many a's b's

$$S \rightarrow Saab \mid aSab \mid aaSb \mid aabS \mid Saba \mid aSba \mid abSa \mid abaS \mid Sbaa \mid bSaa \mid baSa \mid baaS \mid \epsilon$$

4.8

4.8 Let G be the grammar

$$S \rightarrow aB \mid bA$$

$$A \rightarrow a \mid aS \mid bAA$$

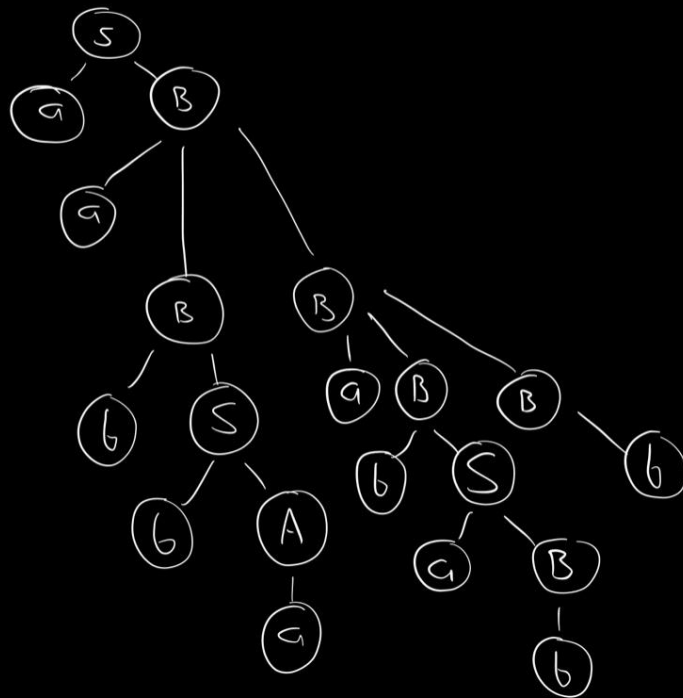
$$B \rightarrow b \mid bS \mid aBB$$

For the string $aaabbabbba$ find a

- a) leftmost derivation, b) rightmost derivation, c) parse tree.

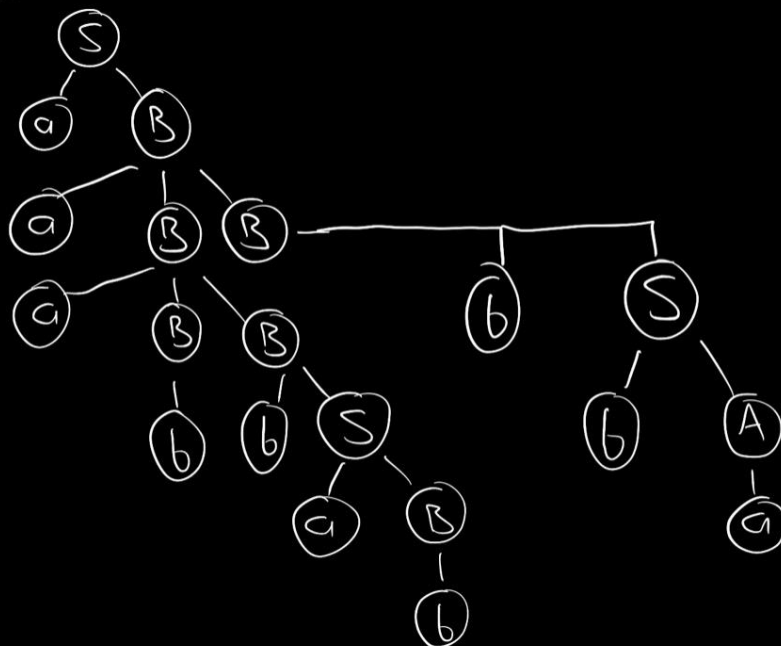
a)

b) rightmost derivation
String aaababbba



b)

a) Leftmost derivation



c) Parse tree

Tarea Ejercicio 4.8

string: aaabbaabba

$S \rightarrow aB$

$S \rightarrow bA$

$A \rightarrow a$

$A \rightarrow aS$

$A \rightarrow bAA$

$B \rightarrow b$

$B \rightarrow bS$

$B \rightarrow aBB$

