

Assignment 6 Written Solutions

Ambiguity

The sentence is $A A B B B B$ and the following are two leftmost derivations of this sentence.

$\langle s \rangle$
 $A \langle s \rangle B$
 $A A \langle s \rangle B B$
 $A A \langle a \rangle B B$
 $A A B \langle b \rangle B B$
 $A A B B B B$

$\langle s \rangle$
 $\langle a \rangle$
 $A \langle a \rangle$
 $A A \langle a \rangle$
 $A A B \langle b \rangle$
 $A A B B B \langle b \rangle$
 $A A B B B B$

Designing Grammars

$\langle s \rangle ::= A \langle s \rangle$
 $| B \langle b \rangle$
 $\langle b \rangle ::= B \langle b \rangle$
 $| B$

Note. This is not the only solution.