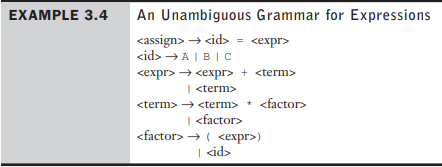
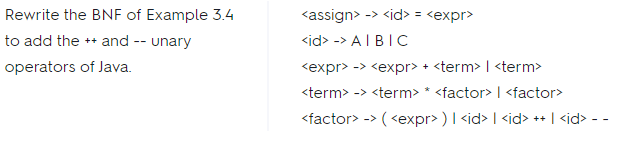
4. Rewrite the BNF of Example 3.4 to add the ++ and -- unary operators

of Java.





11. Consider the following grammar:

<S> → <A> a <B> b

<A> → <A> b | b

<B> → b

Which of the following sentences are in the language generated by this

grammar?

a. babb

b. bbbabb - <A> needs to be followed by “a”, so it’s not possible for “bb” to be followed by another “b”

~~c. bbaaaaabc~~ – There’s no “c” in the grammar

~~d. aaaaaa~~  - There needs to be a “b” in the sentence

21. Using the virtual machine instructions given in Section 3.5.1.1, give an

operational semantic definition of the following:

a. Java do-while

b. Ada for

c. C++ if-then-else

d. C for

e. C switch

