Context-Free Grammar Using Multi-Character Mode - Exercise

Problem:

Suppose we want to accept simple sentences as:

bob wants oranges

bob likes apples

jen wants apples

Create a context-free grammar on JFLAP to accept such sentences.

Solution:

By default, JFLAP assumes that each terminal on a context-free grammar is a single character. We may change this by opening JFLAP and changing this setting to a multi-character mode. Click *Help > Preferences* to do this. Select the Multi-Char Default mode radio button and click *Done*.
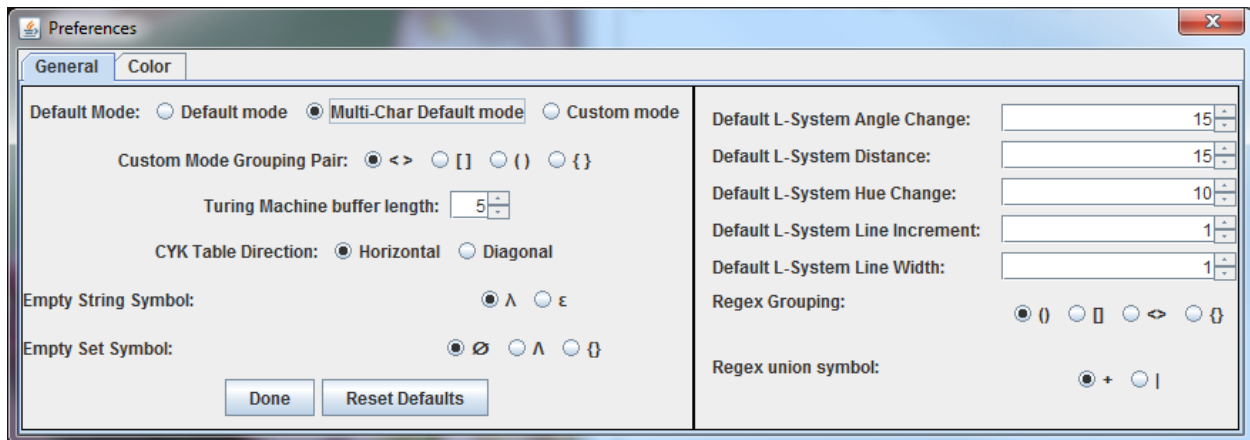
Next, create a grammar rule to accept a noun verb object, S → N V O. Note that you should add spaces in between the right-hand side variables. We will limit *nouns* to *bob* and *jen*.

Next, we add the rules for *verbs* allowing *needs* and *wants*.

Lastly, we add the *objects apples*, *oranges*, and *bananas*.
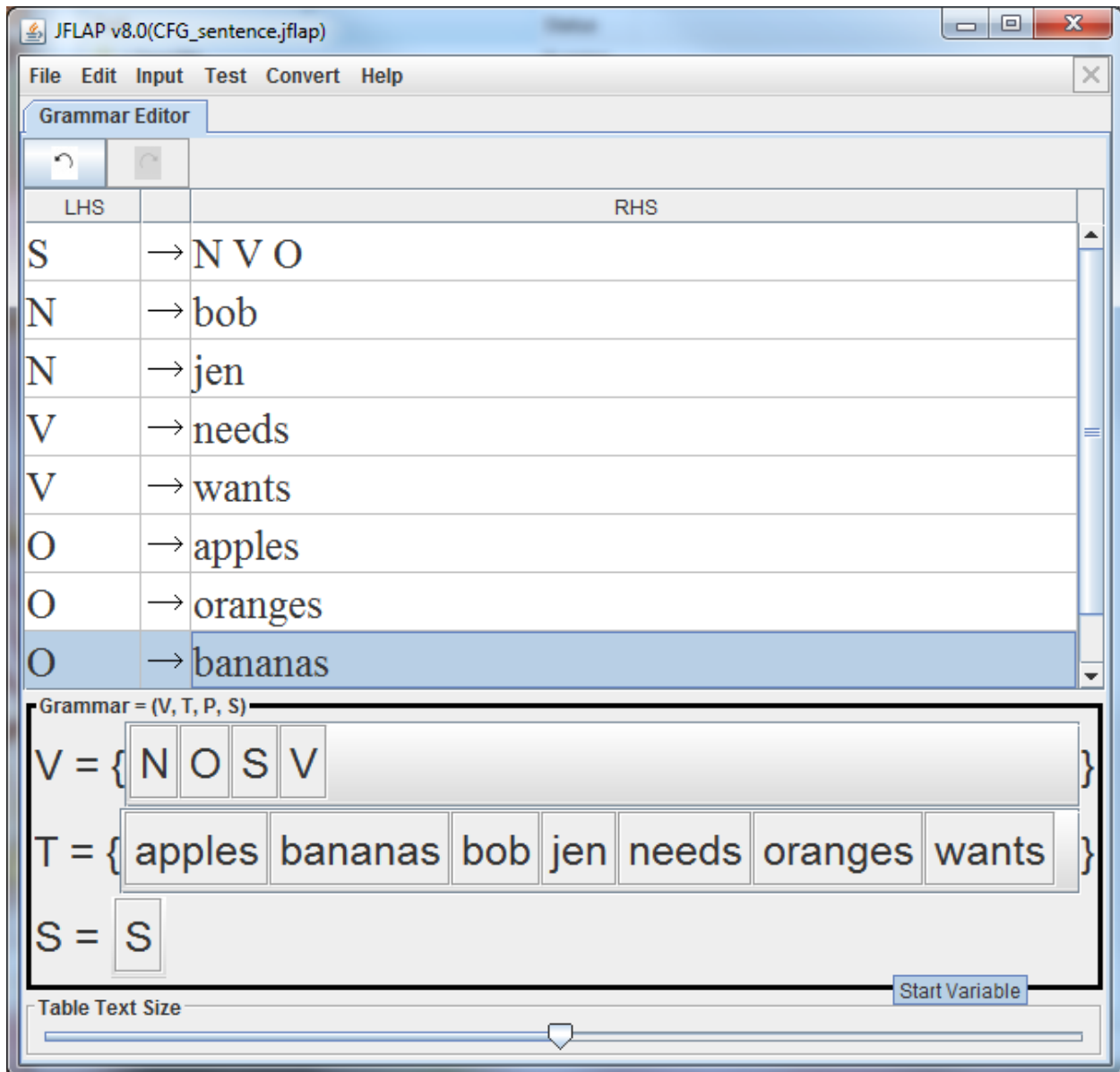
Test an input sentence like bob wants bananas and check that input should be accepted.

Lastly, try an invalid sentence and verify that it is rejected.