

Computer Science 81, Fall 2006
Assignment 6
Due Thur. Oct 12
PDAs and the CYK Algorithm

In the Kozen book, please read lecture 27. Also, you may wish start reading the Van Dalen book, sections 1.1-1.3.

1. Consider the PDA over input alphabet $\{0, 1\}$ with the following rules:

state	stack	input	new state	Push (top at left)
a	s	ϵ	a	ϵ
a	s	0	a	0s
a	0	0	a	00
a	0	1	b	ϵ
b	0	1	b	ϵ
b	s	ϵ	b	ϵ

The initial state is 'a', and acceptance is by empty stack.

Convert this PDA into a 1-state PDA using the technique discussed in class and in the text. Then construct a context-free grammar from that which generates the language that this PDA accepts.

2. Kozen, page 338, exercise 91.
3. Kozen, page 338, exercise 92.