

## Exercises for FLL, Fall 2018, sheet 8 – Solutions

*Return Thursday Nov 8, in class*

*... just a miniature exercise sheet because it's miniquiz (and midterm) time...*

**Exercise 1.** Is *baaab* in the language of the grammar

$S \rightarrow AB \mid BC, A \rightarrow BA \mid a, B \rightarrow CC \mid b, C \rightarrow AB \mid a$ ? Provide the CYK table and the answer.

**Solution:** the CYK table is

	$\{S, C\}$				
	$\{S, A, C\}$	$\{S, C\}$			
	$\{\}$	$\{S, C, A\}$	$\{B\}$		
	$\{S, A\}$	$\{B\}$	$\{B\}$	$\{S, C\}$	
	$\{B\}$	$\{A, C\}$	$\{A, C\}$	$\{A, C\}$	$\{B\}$
<i>b</i>		<i>a</i>	<i>a</i>	<i>a</i>	<i>b</i>

and the answer is yes.