Assignment 4

Issue Date: November 20, 2018
Due Date: ∞
$\sum$ 0 Points

Compiler Construction
INF-21440
WS 2018/2019

Universität Konstanz

University of Konstanz
Database and Information Systems
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Top-Down Parsing

Exercise 1: CFG for Regular Expressions (0 Points)

Write a context-free grammar for the syntax of regular expressions.

Exercise 2: LL(1) Grammars (0 Points)

Consider the following grammar

1	A	$\rightarrow$	B a
2	B	$\rightarrow$	dab
3		$\mid$	C b
4	C	$\rightarrow$	c B
5		$\mid$	A c

Does this grammar satisfy the LL(1) condition? Justify your answer. If it does not, rewrite it as an LL(1) grammar for the same language.

Exercise 3: LL(k) Grammars (0 Points)

Grammars that can be parsed top-down, in a linear scan from left to right, with a k word lookahead are called LL(k) grammars. In the text, the LL(1) condition is described in terms of FIRST sets. How would you define the FIRST sets necessary to describe an LL(k) condition?