

Compiler Construction 2018/19

— Exercise Sheet 6 —

Hand in until November 26th before the exercise class.

General Remarks

- Remember to hand in the programming exercise this week.

Exercise 1

(2 Points)

Show that there exists an $LR(0)$ grammar that is not an $LL(1)$ grammar.

Exercise 2

(10 Points)

Consider the grammar $G = (N, \Sigma, P, S')$:

- $N := \{S', S, A, B\}$
- $\Sigma := \{a, b, c, d, e\}$
- $S' \rightarrow S$
- $S \rightarrow A \mid Bd$
- $A \rightarrow aAb \mid Be$
- $B \rightarrow aBc \mid ac$

- Compute all $LR(0)$ sets of G .
- Specify the (deterministic) $LR(0)$ parsing automaton of G as in Definition 10.2. Especially specify the parsing table. (Do not forget to give a numbering to the grammar rules.)
- Provide a run of the automaton on the input $aaacebb$.