

Script generated by TTT

Title: Petter: Compiler Construction (11.06.2020)
- 32: LR vs LL

Date: Wed Jun 10 16:47:31 CEST 2020

Duration: 07:03 min

Pages: 4

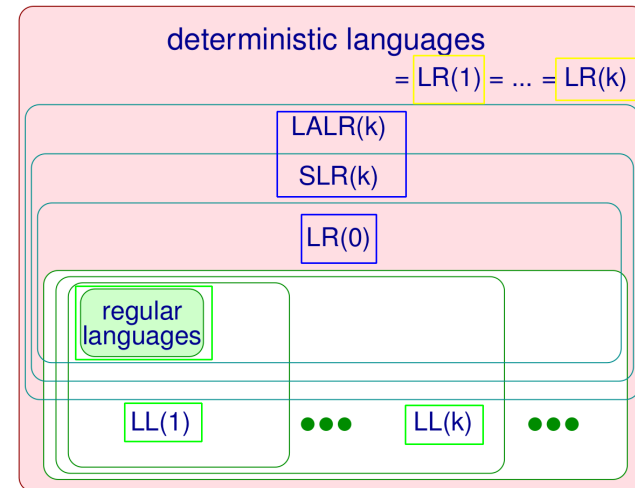
Chapter 3:
Summary

Special LR(k)-Subclasses

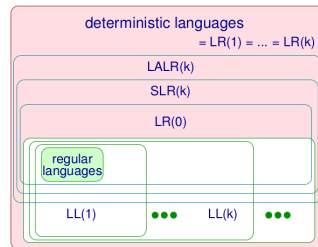
Discussion:

- Our examples mostly were $LR(1)$ – or could be transformed to $LR(1)$
- In general, the canonical $LR(k)$ -automaton has much more states than $LR(G) = LR(G, 0)$
- Therefore in practice, subclasses of $LR(k)$ -grammars are often considered, which only use $LR(G) \dots$
- For resolving conflicts, the items are assigned special lookahead-sets:
 - ① independently on the state itself \implies Simple $LR(k)$
 - ② dependent on the state itself \implies $LALR(k)$

Parsing Methods



Parsing Methods



Discussion:

- All contextfree languages, that can be parsed with a deterministic pushdown automaton, can be characterized with an **LR(1)**-grammar.
- **LR(0)**-grammars describe all **prefixfree** deterministic contextfree languages
- The language-classes of **LL(k)**-grammars form a **hierarchy** within the deterministic contextfree languages.