

Basic Facts about Context-Free Languages

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This list will grow.

- Context-free languages (CFL) are generated by context-free grammars (CFG).
- Some grammars are *ambiguous*, meaning that there are some strings that they generate with more than one parse tree.
- A language could have ambiguous and unambiguous grammars.
- A context-free language can be recognized by a pushdown automaton.
- There are non-deterministic PDA that do **not** have any equivalent deterministic version.
- A language that can be recognized by a deterministic PDA (DPDA) is called a deterministic CFL (DCFL).
- The set of DCFLs is closed under complementation: if a language is a DCFL its complement is also a DCFL.
- The intersection of a regular language and a CFL is *always* a CFL.
- The intersection of a CFL and another CFL may **not** be a CFL.
- The complement of a CFL may **not** be a CFL.