Parsing Expression Grammars

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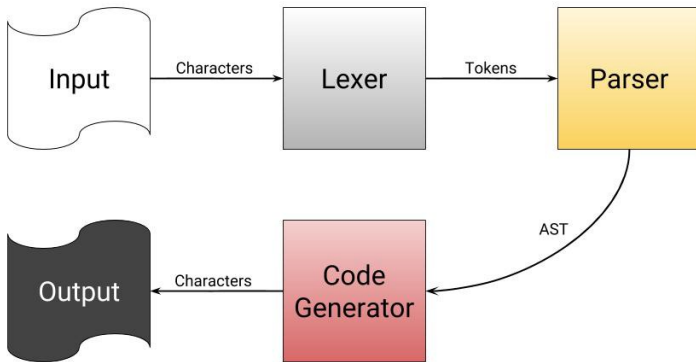
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Parsing

What's a parser?

Part of the compiler. Checks the stream of tokens produced by the *lexer* for syntactical errors and produces an IR representation (usually an abstract syntax tree) of the source that is used in later steps to generate machine code.

Context free grammars

A programming language syntax can be described using a context free grammar G.

We want to check if the source code is actually valid code

Given the rules of grammar G, we want to find a sequence of rule
applications that generates a target expression (**derivation**).
Parsing is the process of discovering such sequence.

Formal definiton of PEG

A concrete example: *pgen*