

29/01/2019 Language Engineering

Semantics of programming languages

BNF

Syntactic complexity

$x -= y = (x = x + y) - y$

Syntactic ambiguity

if (...) if (...) ...; else ...

Semantic complexity

$y = x++ + x++$

Semantic ambiguity

$(x \neq 0) (x \% 2 == 1) ? \text{"odd"} : \text{"even"}$

Semantic undefinability

while (x/x)

Interaction of syntax & semantics

$A \neq B$