CSE6390 3.0 Special Topics in AI & Interactive Systems II
Introduction to Computational Linguistics
Insructor: Nick Cercone – 3050 CSEB – nick@cse.yorku.ca
Tuesdays,Thursdays 10:00-11:30 – South Ross 104
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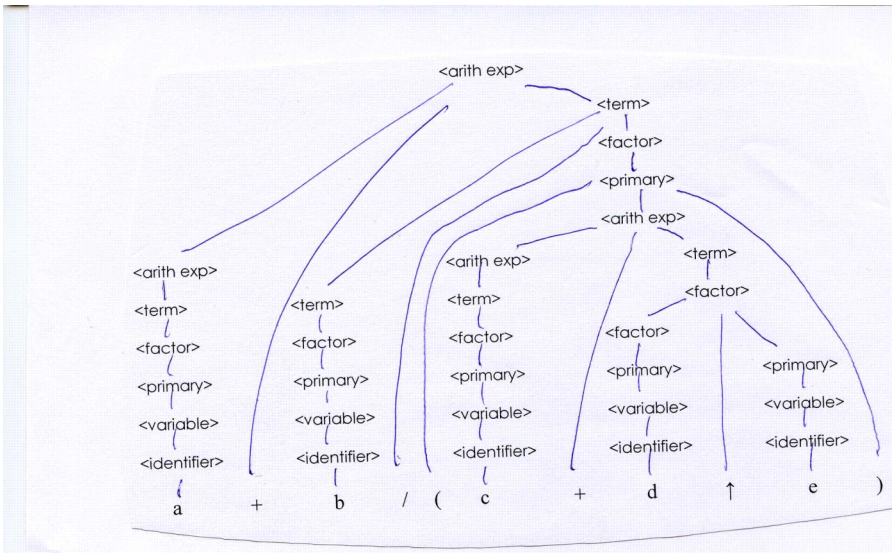
BNF Example

$G_1$is a (context free) BNF grammar for a simple programming language arithmetic expression.

<arithmetic expression>	□	<term> | <arithmetic expression> + <term> | <arithmetic expression> - <term>
<term>	→	<factor> | <term> x <factor> | <term> / <factor>
<factor>	→	<primary> | <factor> ↑ <primary>
<primary>	→	<variable> | <number> | (<arithmetic expression>)
<variable>	→	<identifier> | <identifier> [<subscript list>]
<subscript list>	→	<arithmetic expression> | <subscript list> , <arithmetic expression>



a+b/(c+d^e)

The same language may be defined by many different grammars.

G_2 is another BNF grammar for a simple programming language arithmetic expression equivalent to grammar G1.

<arithmetic expression>	□	<term> | <arithmetic expression> ↑ <term> | <arithmetic expression> x <term> | <arithmetic expression> + <term>
<term>	→	<primary> | <term> - <primary> | <term> / <primary>
<primary>	→	<variable> | <number> | (<arithmetic expression>)
<variable>	→	<identifier> | <identifier> [<subscript list>]
<subscript list>	→	<arithmetic expression> | <arithmetic expression> , <subscript list>