

Grammar:

$E \rightarrow T E'$

$T \rightarrow F T'$

$F \rightarrow (E) \mid id$

$E' \rightarrow + T E' \mid \#$

$T' \rightarrow * F T' \mid \#$

Parsing Table:

Parsing Table:					
	id	+	*	()
E	T E'			T E'	
T	F T'			F T'	
F	id			(E)	
E'		+ T E'			#
T'		#	* F T'		#

Input 1:

String: $x + y * z$

Tokenized input: $id + id * id$

Output 1:

Parsing:		
Current Input	Current Stacktop	Next Action
id	E	$E \rightarrow T E'$
id	T	$T \rightarrow F T'$
id	F	$F \rightarrow id$
id	id	Match
+	T'	$T' \rightarrow \#$
+	E'	$E' \rightarrow + T E'$
+	+	Match
id	T	$T \rightarrow F T'$
id	F	$F \rightarrow id$
id	id	Match
*	T'	$T' \rightarrow * F T'$
*	*	Match
id	F	$F \rightarrow id$
id	id	Match
\$	T'	$T' \rightarrow \#$
\$	E'	$E' \rightarrow \#$
Accepted		

Input 2:

String: $x + (y * z$

Tokenized input: $id + (id * id$

Output 2:

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Parsing:
Current Input   Current Stacktop   Next Action
id              E              E-> T E'
id              T              T-> F T'
id              F              F-> id
id              id             Match
+              T'             T'-> #
+              E'             E'-> + T E'
+              +              Match
(              T              T-> F T'
(              F              F-> ( E )
(              (              Match
id              E              E-> T E'
id              T              T-> F T'
id              F              F-> id
id              id             Match
*              T'             T'-> * F T'
*              *              Match
id              F              F-> id
id              id             Match
$              T'             T'-> #
$              E'             E'-> #
Not Accepted
Some syntax error has occurred near word number 7
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Input 3:

String: $x + (y * (-z))$

Tokenized input: $id + (id * (error id))$

Output 3:

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Parsing:
Current Input    Current Stacktop    Next Action
id              E              E-> T E'
id              T              T-> F T'
id              F              F-> id
id              id             Match
+              T'             T'-> #
+              E'             E'-> + T E'
+              +              Match
(              T              T-> F T'
(              F              F-> ( E )
(              (              Match
id              E              E-> T E'
id              T              T-> F T'
id              F              F-> id
id              id             Match
*              T'             T'-> * F T'
*              *              Match
(              F              F-> ( E )
(              (              Match
Not Accepted

Encountered lexical error

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