

----- EXPRESSION GRAMMAR -----

----- LL(1) grammar specification -----

Number of grammar variables? 5

More than one character for a variable supported

Variable 1: E

Variable 2: E'

Variable 3: T

Variable 4: T'

Variable 5: F

Number of terminals? 6

Please consider epsilon as e. You may enter more than one character for each terminal

Terminal 1: id

Terminal 2: (

Terminal 3:)

Terminal 4: +

Terminal 5: *

Terminal 6: e

Number of rules? 8

Please (in RHS) give a whitespace between successive entities (terminals, non-terminals, or terminal non-terminal) else the code will match largest prefix of RHS to terminal/variable

Rule 1 LHS variable: E

Rule 1 RHS string: T E'

Rule 2 LHS variable: E'

Rule 2 RHS string: + T E'

Rule 3 LHS variable: E'

Rule 3 RHS string: e

Rule 4 LHS variable: T

Rule 4 RHS string: F T'

Rule 5 LHS variable: T'

Rule 5 RHS string: * F T'

Rule 6 LHS variable: T'

Rule 6 RHS string: e

Rule 7 LHS variable: F

Rule 7 RHS string: (E)

Rule 8 LHS variable: F

Rule 8 RHS string: id

Start symbol: E

----- LL(1) grammar specifics entered -----

Variables: E E' T T' F

Terminals: id () + * e

Grammar rules:

E -> T E'

E' -> + T E'

E' -> e

T -> F T'

T' -> * F T'

T' -> e

F -> (E)

F -> id

----- FIRST SET -----

E: (id

E': + e

T: (id

T': * e

F: (id

----- FOLLOW SET -----

E: \$)

E': E E' \$) E E'

T: + e + e

T': T T' + e + e T T') \$

F: * e * e

----- NUMBERED PRODUCTIONS -----

0: E -> T E'

1: E' -> + T E'

2: E' -> e

3: T -> F T'

4: T' -> * F T'

5: T' -> e

6: F -> (E)

7: F -> id

----- PREDICTIVE PARSING TABLE -----

	id	()	+	*	e	\$
E	0	0	-1	-1	-1	-1	-1
E'	-1	-1	2	1	-1	2	2
T	3	3	-1	-1	-1	-1	-1
T'	-1	-1	5	5	4	5	5
F	7	6	-1	-1	-1	-1	-1

----- INPUT STRING -----

Enter the input string: id + id * id \$

E\$ id+id*id\$

TE'\$ id+id*id\$

FT'E'\$ id+id*id\$

idT'E'\$ id+id*id\$

T'E'\$ +id*id\$

eE'\$ +id*id\$

E'\$ +id*id\$

+TE'\$ +id*id\$

TE'\$ id*id\$

FT'E'\$ id*id\$

idT'E'\$ id*id\$

T'E'\$ *id\$

*FT'E'\$ *id\$

FT'E'\$ id\$

idT'E'\$ id\$

T'E'\$ \$

eE'\$ \$

E'\$ \$

```
e$      $
$        $
$        $
```

Underflow

----- INPUT STRING -----

Enter the input string: id

```
E$      id
TE'$    id
FT'E'$  id
idT'E'$ id
```

----- INPUT STRING -----

Enter the input string: id * (id + id) \$

```
E$T'E'      id*(id+id)$
TE'$T'E'     id*(id+id)$
FT'E'$T'E'   id*(id+id)$
idT'E'$T'E'  id*(id+id)$
T'E'$T'E'    *(id+id)$
*FT'E'$T'E'  *(id+id)$
FT'E'$T'E'   (id+id)$
(E)T'E'$T'E' (id+id)$
E)T'E'$T'E'  id+id)$
TE')T'E'$T'E' id+id)$
FT'E')T'E'$T'E' id+id)$
idT'E')T'E'$T'E' id+id)$
T'E')T'E'$T'E' +id)$
eE')T'E'$T'E' +id)$
E')T'E'$T'E' +id)$
+TE')T'E'$T'E' +id)$
TE')T'E'$T'E' id)$
FT'E')T'E'$T'E' id)$
idT'E')T'E'$T'E' id)$
T'E')T'E'$T'E' )$
eE')T'E'$T'E' )$
E')T'E'$T'E' )$
e)T'E'$T'E' )$
)T'E'$T'E' )$
T'E'$T'E' $
```

```
eE'$T'E' $
E'$T'E' $
e$T'E' $
$T'E' $
T'E' $
eE' $
E' $
e $
$
$
```

Underflow

----- INPUT STRING -----

Enter the input string: id + \$

```

E$      id+$
TE'$    id+$
FT'E'$  id+$
idT'E'$ id+$
T'E'$   +$
eE'$    +$
E'$     +$
+TE'$   +$
TE'$    $
Error in parsing
----- INPUT STRING -----
Enter the input string: id $
E$E'$   id$
TE'$E'$ id$
FT'E'$E'$ id$
idT'E'$E'$ id$
T'E'$E'$ $
eE'$E'$ $
E'$E'$ $
e$E'$ $
$E'$ $
E'$ $
e$ $
$ $
$ $

Underflow
----- INPUT STRING -----
Enter the input string: * $
E$ *$
Error in parsing
----- INPUT STRING -----
Enter the input string:

```