

Ch5: Use LL(1) parse table

Content

There're a LL(1) grammar and parse table. Please use these to parse the following code. (write all the parsing steps(Stack,Input,Apply Rule))

$S \rightarrow TS'$ 1

$S' \rightarrow +TS'$ 2

$S' \rightarrow \lambda$ 3

$T \rightarrow FT'$ 4

$T' \rightarrow *FT'$ 5

$T' \rightarrow \lambda$ 6

$F \rightarrow (S)$ 7

$F \rightarrow id$ 8

Non-terminal	Input symbols					
	Id	+	*	()	\$
S	1			1		
S'		2			3	3
T	4			4		
T'		6	5		6	6
F	8			7		

Input : (id+id)*id\$

You have already answered the quiz.

Stack	Apply Rule	Remain Input
S		(id+id)id\$
	[1] $S \rightarrow TS'$	
\$S'T		(id+id)id\$
	[4] $T \rightarrow FT'$	
\$S'T'F		(id+id)id\$
	[7] $F \rightarrow (S)$	
\$S'T')S((id+id)id\$
	Match	
\$S'T')S		id+id)id\$
	[1] $S \rightarrow TS'$	
\$S'T')S'T		id+id)id\$
	[4] $T \rightarrow FT'$	
\$S'T')S'T'F		id+id)id\$
	[8] $F \rightarrow id$	
\$S'T')S'T'id		id+id)id\$
	Match	
\$S'T')S'T'		+id)id\$
	[6] $T' \rightarrow \lambda$	

$\$S'T')S'$		$+id)id\$$
	$[2]S' \rightarrow +TS'$	
$\$S'T')S'T+$		$+id)id\$$
	<i>Match</i>	
$\$S'T')S'T$		$id)id\$$
	$[4]T \rightarrow FT'$	
$\$S'T')S'T'F$		$id)id\$$
	$[8]F \rightarrow id$	
$\$S'T')S'T'id$		$id)id\$$
	<i>Match</i>	
$\$S'T')S'T'$		$)id\$$
	$[6]T' \rightarrow \lambda$	
$\$S'T')S'$		$)id\$$
	$[3]S' \rightarrow \lambda$	
$\$S'T')$		$)id\$$
	<i>Match</i>	
$\$S'T'$		$id\$$
	$[5]T' \rightarrow FT'$	
$\$S'T'F$		$*id\$$
	<i>Match</i>	
$\$S'T'F$		$id\$$
	$[8]F \rightarrow id$	
$\$S'T'id$		$id\$$
	<i>Match</i>	
$\$S'T'$		$\$$
	$[6]T' \rightarrow \lambda$	
$\$S'$		$\$$
	$[3]S' \rightarrow \lambda$	
$\$$		$\$$
	<i>Accept!</i>	