MODULE 5

Parsing Table

LL(I) GRAMMAR

E→TE'

E'→+TE'|ε

T→FT'

T'→*FT'|ε

F→(E)|id

	FIRST	FOLLOW
E	(, id	$,)
E'	+ , ε	$,)
T	(, id	+ , $,)
T'	* , ε	+ , $,)
F	(, id	* , + , $,)

LL(1) PARSING ALGORITHM

Input. Grammar G.

Output. Parsing table M.

Method.

1. For each production $A \rightarrow \alpha$ of the grammar, do steps 2 and 3.

2. For each terminal a in FIRST(α), add $A \rightarrow \alpha$ to $M[A, a]$.

3. If ϵ is in FIRST(α), add $A \rightarrow \alpha$ to $M[A, b]$ for each terminal b in FOLLOW(A). If ϵ is in FIRST(α) and $\$$ is in FOLLOW(A), add $A \rightarrow \alpha$ to $M[A, \$]$.

4. Make each undefined entry of M be error.

LL(1)   PARSING TABLE

NONTER-MINAL	id	+	*	(	)	$
E	$E \rightarrow TE'$			$E \rightarrow TE'$		
E'		$E' \rightarrow +TE'$			$E' \rightarrow \epsilon$	$E' \rightarrow \epsilon$
T	$T \rightarrow FT'$			$T \rightarrow FT'$		
T'		$T' \rightarrow \epsilon$	$T' \rightarrow *FT'$		$T' \rightarrow \epsilon$	$T' \rightarrow \epsilon$
F	$F \rightarrow id$			$F \rightarrow (E)$		