

procedure SLRActionTable($\{I_i\}$ the item sets of G)
 Where I_i is an item set (aka LR parser state) of the grammar G .
 Typically I_0 is the item set generated by the fresh start of the
 grammar **goal symbol** S which has one production rule
 terminated with $\$$.

Recall that $A, B \in N$, the set of G 's non-terminals, $a \in \Sigma$ and
 $\alpha, \beta \in (N \cup \Sigma_\$)^*$ are sequences of grammar symbols.

let $T[.][.]$ be the SLR action table with row i representing parser
 state i and columns for $X \in N \cup \Sigma_\$$ the grammar symbols of
 G augmented by $\$$.

```

foreach (  $I_i$  item set in  $\{I_i\}$  ) do (
  foreach (  $X \in N \cup \Sigma_\$$  ) do (
    if (  $A \rightarrow \alpha \bullet X \pi \in I_i$  ) then (
      set  $T[i][X]$  operation to SHIFT AND GO TO  $GoTo(I_i, X)$ 
    )
  )
  foreach (  $P = A \rightarrow \alpha \bullet \mid A \rightarrow \bullet \lambda \in I_i$  ) do (
    foreach (  $f \in followSet(A)$  ) do (
      if (  $T[i][f]$  is already specified ) FAIL WITH CONFLICT
      set  $T[i][f]$  operation to REDUCE WITH  $P$ 
    )
  )
  if (  $S \rightarrow \pi \$ \bullet \in I_i$  ) then (
    set  $T[i][.]$  operation to REDUCE WITH  $S \rightarrow \pi \$$  AND ACCEPT
  )
)

```