EDAN65: Compilers
Computer Science
Lund University

## E05: Nullable, FIRST, FOLLOW

E05-1: Consider the following grammar (p1 etc. are production names):

$$
\begin{array}{ll}
\text { p1: } & \mathrm{S} \rightarrow \mathrm{~T} \$ \\
\text { p2: } \mathrm{T} \rightarrow \mathrm{ID} \\
\text { p3: } \mathrm{T} \rightarrow \text { " }(" \mathrm{~L} \text { " }) " \\
\text { p4: } \mathrm{L} \rightarrow \mathrm{~T} R \\
\text { p5: } \mathrm{R} \rightarrow \text { " " L } \\
\text { p6: } \mathrm{R} \rightarrow \epsilon
\end{array}
$$

(a) Compute Nullable, FIRST sets, and FOLLOW sets for the nonterminals in the grammar.
(b) Use this information to construct an $\mathrm{LL}(1)$ table for the grammar.
(c) Is the grammar $\operatorname{LL}(1)$ ?

