Consider the Grammar:

\[
\begin{align*}
\text{<stmt>} & \rightarrow \text{BEGIN <stmt_list> END} \\
\text{<stmt>} & \rightarrow \text{LOAD} \\
\text{<stmt>} & \rightarrow \text{PRINT} \\
\text{<stmt_list>} & \rightarrow \text{<stmt_list>} ; \text{<stmt>} \\
\text{<stmt_list>} & \rightarrow \text{<stmt>} \\
\end{align*}
\]

Tasks:

1. Construct the Canonical LR(0) collection for the above grammar. (you can modify the grammar if needed).

2. Using the above construct the DFA for viable prefixes.

3. Compute the FOLLOW function for the grammar.

4. Construct the SLR parsing table.

5. Trace your SLR parser on the input

\[
\text{BEGIN PRINT ; BEGIN LOAD ; PRINT ; LOAD END END}
\]

Make sure that you show ALL your work. Don’t just write the answers to the questions. You will loose points. Show all the work you did to come up with them.

Instructions. You should hand the solutions of the above exercises with a cover page that should contain only: (i) your name, (ii) the class number “CSE 244”, (iii) the semester “Fall 2004”, (iv) the homework number “Homework #3”. The cover page must be written in a word-processor. The remaining of this homework may be written by hand.