1. Consider the following grammar where $s$ is the start symbol, $v$ is a variable name, and $n$ is an integer value.

\[
\begin{align*}
  s & \rightarrow v = e \\
  & \quad | \quad \text{for } v \text{ from } e \text{ upto } e \{ s \} \\
  & \quad | \quad \text{for } v \text{ from } e \text{ downto } e \{ s \} \\
  e & \rightarrow t | t + e | t - e \\
  t & \rightarrow v | n
\end{align*}
\]

(a). Give the parse tree for the string "for x from 0 upto y + 1 { x = y - x }".

(b). Determine whether this grammar is $LL(k)$. If it is, give $k$. If it isn’t, explain why not.
(c). Rewrite the grammar so that it is \textit{LL(1)}.

2. Find at least one place in the MyPL grammar that requires more than one lookahead token.

3. Finish the recursive descent functions for the simple “assignment” language from the Lecture 7 notes. Write the functions below.