1. (Left-over assignment 6 from the last week)
   (a) Present an algorithm for precomputing the occurrence masks $U$ of the Shift-And method for a given pattern. Assume that the alphabet $\Sigma$ is fixed, and use C-like bit operations.
   (b) Explain an extension of the Shift-And method to handle wild-cards efficiently (both in the pattern and in the text).

2. Present the suffix tree for the string $S$ = “OMALOMA”, and explain how it would be used to locate occurrences of patterns
   (a) “OMA” and
   (b) “ALA”
   in string $S$.

3. Prove that a suffix tree with $m$ leaves has at most $2m - 1$ edges. (Hint: Consider the construction.)

4. (Gusfield, Ex. 6.1) Construct an infinite family of strings over a fixed alphabet, where the total length of the edge-labels on their suffix trees grows faster than $\Theta(m)$ (where $m$ is the length of the string). That is, show that linear-time suffix tree algorithms would be impossible if edge-labels were written explicitly on the edges.

5. Present the implicit suffix tree for the string “AASIASSA”. Indicate also the suffix links.