58093 String Processing Algorithms (Autumn 2014)
Exercises 7 (December 9)

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1. Let $T =$ `lallilla$`.
   (a) Give the suffix tree of T including suffix links.
   (b) Give the suffix array of T together with the LCP array.
2. The reverse of a string $S[0..m)$ is the string $S^R = S[m-1]S[m-2]..S[0]$. Describe an algorithm for finding the longest factor S of T such that the reverse S^R is a factor of T too. The algorithm should work in linear time on a constant alphabet.
3. What is the number of distinct factors in the string `abracadabra`?
4. Give a linear time algorithm for computing the matching statistics of S with respect to T from the generalized suffix *array* of S and T and the associated LCP array (without constructing the suffix tree).
5. Simulate the construction of the suffix array for the text `mississippi$` using prefix doubling.