1. Let $T = \text{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 $\text{abracadabra}$?

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. Let $L = \text{rttrra}$ be the Burrows–Wheeler transform of a text $T$.

   (a) What is $T$?
   (b) Simulate backward search on $T$ for the pattern $P = \text{ari}$.

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