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 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.