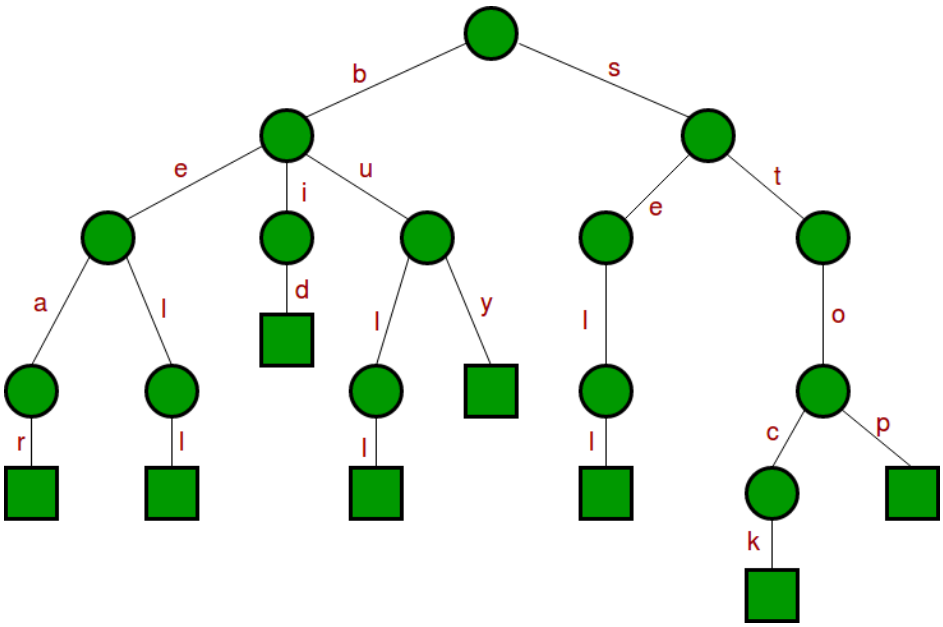
Suffix Trees and Arrays

Q1. Construct a suffix tree and use it to search given query patterns. Consider the example below.

With the following array of words, {bear, bell, bid, bull, buy, sell, stock, stop}, the tree would look like the following diagram.



Search algorithm:

1) Starting from the first character of the pattern and root of Suffix Tree, do following for every character.
    a) For the current character of pattern, if there is an edge from the current node of suffix tree, follow the edge.
    b) If there is no edge, print "pattern doesn't exist in text" and return.

2) If all characters of pattern have been processed, i.e., there is a path from root for characters of the given pattern, then print "Pattern found".

Q2. Using similar example/approach, implement the operations on suffix arrays. First build the suffix tree and then convert to suffix array.