
DSC 190 - Discussion 07

Problem 1.

Draw a trie representing the following collection of strings:

```
{"friend", "frog", "frob", "fun", "glob", "glarb", "glow", "guard"}
```

Problem 2.

Draw the suffix tree for the following strings:

a) "mississippi"

b) "aaaa"

Problem 3.

You are given an input string and a dictionary of words, find out if the input string can be segmented into a space-separated sequence of dictionary words using a Trie. Consider the following examples:

Example 1:

Input: s = "applepenapple", wordDict = ["apple", "pen"]

Output: true

Example 2:

Input: s = "catsandog", wordDict = ["cats", "dog", "sand", "and", "cat"]

Output: false

Solution:

```
def checkWordBreak(s, root):
    n = len(s)
    if(n == 0):
        return True
    for i in range(1, n+1):
        if(root.membership_query(s,stop=i) and checkWordBreak(s[i:], root)):
            return True
    return False

if __name__ == "__main__":
    root = TrieNode()
    for w in wordDict:
        root.insert(w)
    return checkWordBreak(s, root)
```