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# Crux

Text Processing

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# String Class in Java

1. Immutable
2. Substring
3. Concat
4. indexOf
5. startsWith
6. endsWith

# Mutable String?

# StringBuffer

1. Mutable String
2. Append
3. Insert
4. Reverse
5. `setCharAt`
6. `.toString`

# How to choose between String and StringBuffer?

# Text Processing

1. Pattern Matching
  - a. Brute Force
  - b. Boyer Moore
  - c. Tries
2. Text Compression
3. Text Similarity
  - a. LCS
  - b. Edit Distance

# Pattern Matching Algorithms

# Lets implement the Brute Force Algorithm

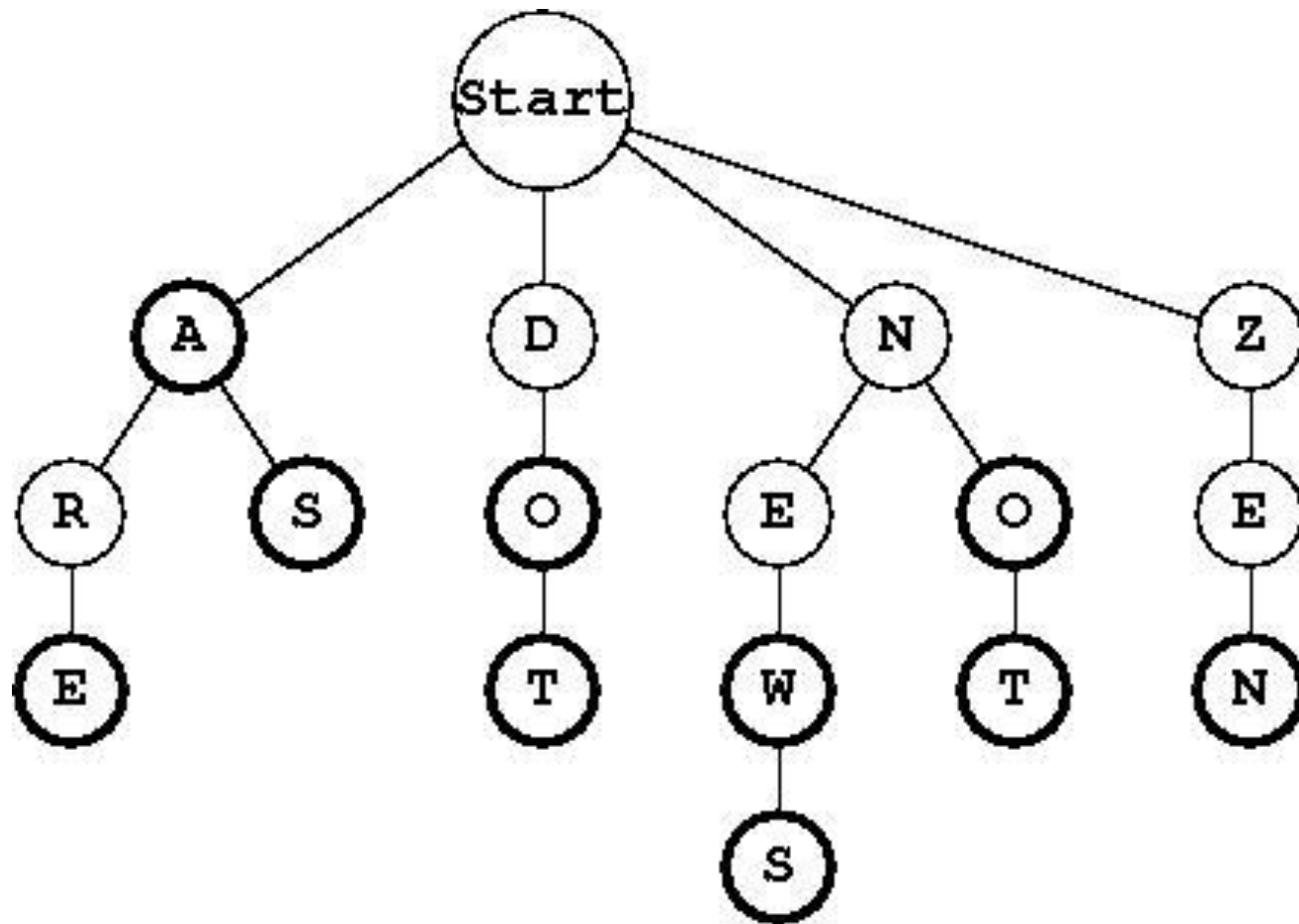


# Boyer Moore Algorithm

What if we get multiple queries for a fixed String?

# Trie

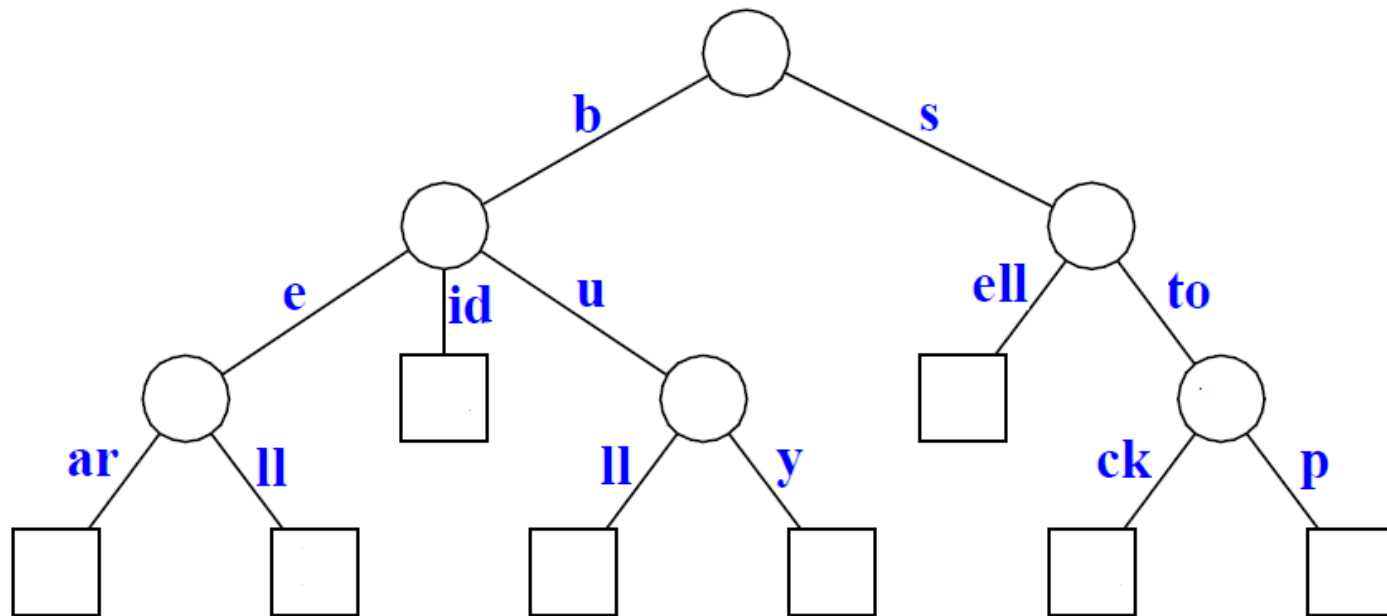
# Trie



# Lets Implement Trie Class

# Compressed Tries

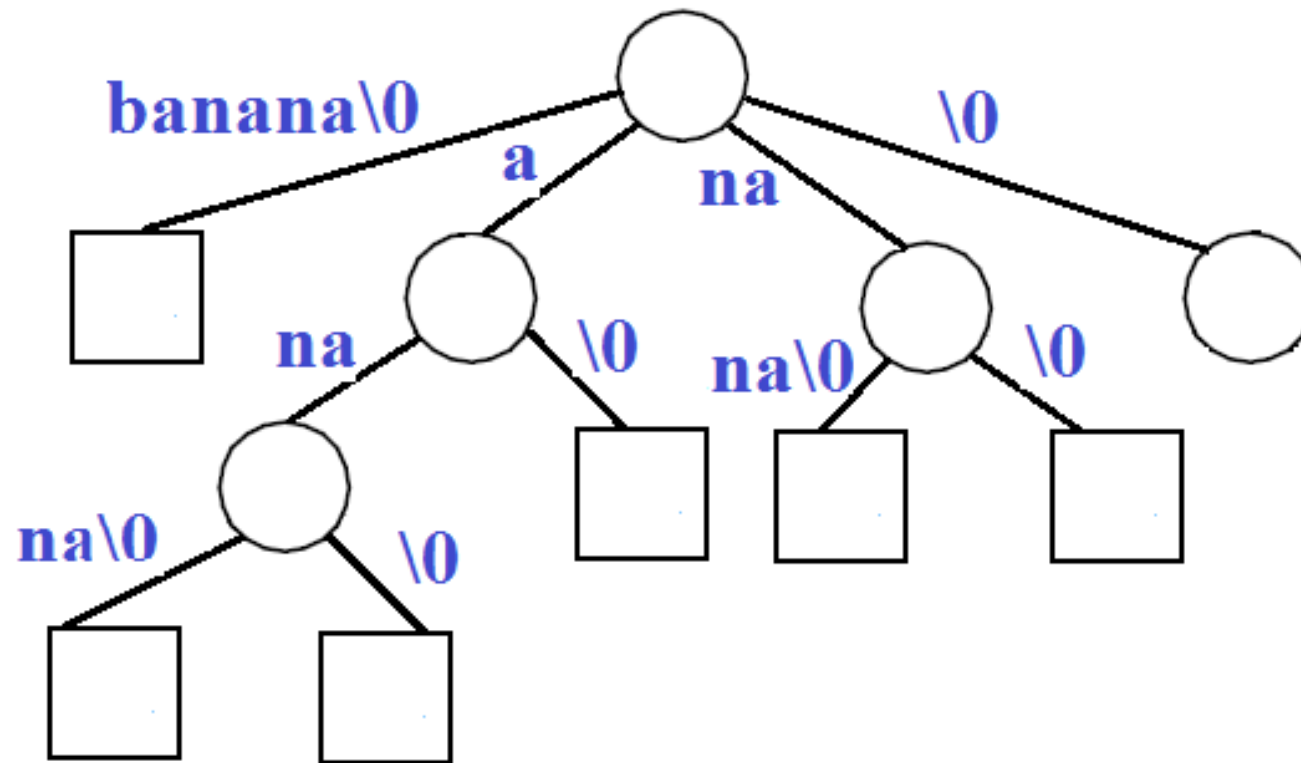
# Trie



# Suffix Tries



# Trie



# Text Compression

# Huffman Coding



# Thank You!

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