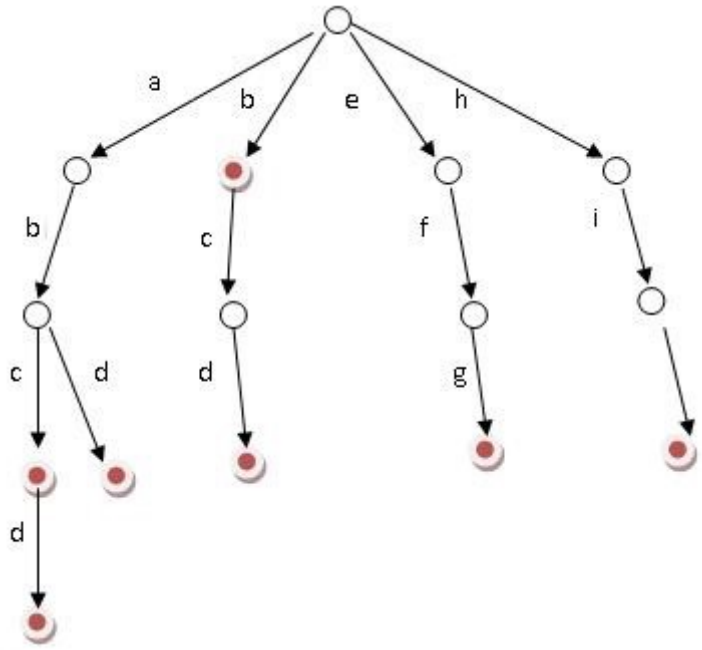
前缀树



前缀树的信息存在连接处，而不是节点处。

```
class Trie{
    class TrieNode{
        private TrieNode[] nexts;
        private boolean isEnd;

        public TrieNode() {
            nexts = new TrieNode[26];
            isEnd = false;
        }
    }

    private TrieNode root;

    public Trie() {
        root = new TrieNode();
    }

    public void insert(String word) {
        TrieNode cur = root;
        for(char letter:word.toCharArray()) {
            if(cur.nexts[letter-'a']==null) {
                cur.nexts[letter-'a']=new TrieNode();
            }
            cur = cur.nexts[letter-'a'];
        }
        cur.isEnd = true;
    }

    /** Returns if the word is in the trie. */
    public boolean search(String word) {
        TrieNode node = searchPrefix(word);
```

```
        return node!=null && node.isEnd==true;
    }

    /** Returns if there is any word in the trie that starts with the given
prefix. */
    public boolean startsWith(String prefix) {
        TrieNode node = searchPrefix(prefix);
        return node!=null;
    }

    private TrieNode searchPrefix(String word) {
        TrieNode cur = root;
        for(char letter:word.toCharArray()) {
            if(cur.nexts[letter-'a']!=null) {
                cur = cur.nexts[letter-'a'];
            }else {
                return null;
            }
        }
        return cur;
    }
}
```