SC1007 Data Structures and Algorithms

Lab 8: Trie

Q1 Modify the insert() method in the LinkedList class so that it always inserts characters in **alphabetical order**.

For example:
>Insert: 'c', 'a', 'b'
>LinkedList: a -> b -> c
>Insert: 'e', 'd'
>LinkedList: a -> b -> c -> d -> e

Q2 With the modified insert() method, implement a method to print all words stored in a trie in a lexicographical order.

def print_words_alphabetically():

For example, Insert: "banana", "apple", "bat", "ball", "band", "cat"
The results to print words in a lexicographical order:
>apple, ball, band, banana, bat, cat

Q3 Modify the method of Q2 to print all words stored in a trie in a reverse lexicographical order.

def print_words_reverse_alphabetically():

For example, Insert: "banana", "apple", "bat", "ball", "band", "cat"
The results to print words in a revers lexicographical order:
>cat, bat, banana, band, ball, apple