

SC1007 Data Structures and Algorithms

Lab 8: Trie

Q1 Modify the `_add_child()` method in the Trie class so that it always inserts characters in an **alphabetical order**.

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

```
def print_words_alphabetically(self):
```

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 Implement a method to print all words stored in a trie in a reverse lexicographical order.

```
def print_words_reverse_alphabetically(self):
```

For example, Insert: "banana", "apple", "bat", "ball", "band", "cat"

The results to print words in a reverse lexicographical order:

cat, bat, banana, band, ball, apple