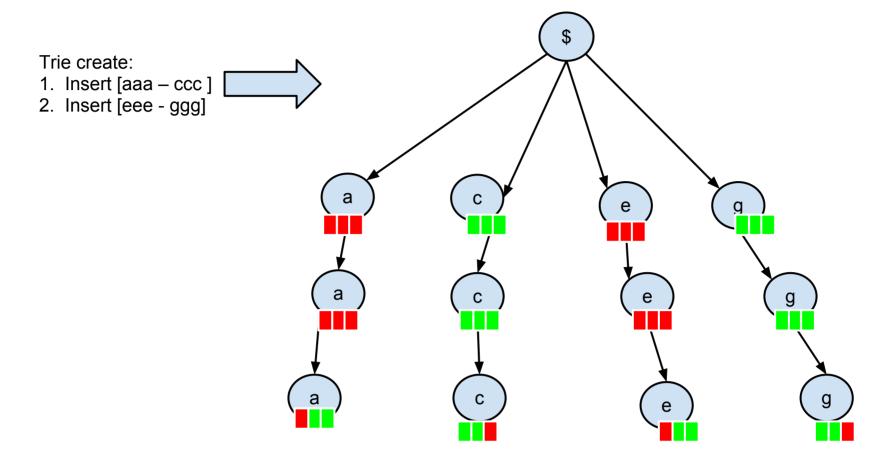


A single TrieNode with pointer from parent node and pointers to child nodes [0-127]. Three flags represent the following:

- 1. LeftSide is valid.
- 2. Node and Subtrie is valid.
- 3. RightSide is valid.

Red is invalid. Green is valid.



TestCase1 (non-overlapping ranges)

- i. Search for bbb
- ii. Search for ddd

TestCase2 (overlapping ranges)

- iii. Search ddd
- iv. Search bbb

Pseudocode:

- a. start at root node \$. node = root
- b. for character,c in input:

if c is not childnode of node

prev_node = node.predecessor(...)

next_node = node.sucessor(...)

return true, if prev.right_valid and next.left_valid

else

node = childnode

c. If node.valid: //Valid eaf node for input in trie return true

