Tries

December 5, 2017

```python
In [2]: class Node(object):
            def __init__(self, character):
                self.character = character
                self.leftNode = None
                self.middleNode = None
                self.rightNode = None
                self.value = 0

        class TST(object):
            def __init__(self):
                self.rootNode = None

            def put(self, key, value):
                self.rootNode = self.putItem(self.rootNode, key, value, 0);

            def putItem(self, node, key, value, index):
                c = key[index]

                if node == None:
                    node = Node(c)

                if c < node.character:
                    node.leftNode = self.putItem(node.left, key, value, index)
                elif c > node.character:
                    node.rightNode = self.putItem(node.rightNode, key, value, index)
                elif index < len(key) - 1:
                    node.middleNode = self.putItem(node.middleNode, key, value, index + 1)
                else:
                    node.value = value

                return node;

            def get(self, key):
                node = self.getItem(self.rootNode, key, 0)

                if node == None:
                    return -1
                return node.value
```

```python
    def getItem(self, node, key, index):
        if node == None:
            return None

        c = key[index]

        if c < node.character:
            return self.getItem(node.leftNode, key, index)
        elif c > node.character:
            return self.getItem(node.rightNode, key, index)
        elif index < len(key) - 1:
            return self.getItem(node.middleNode, key, index + 1)
        else:
            return node

if __name__ == "__main__":
    tst = TST()
    tst.put("apple", 100)
    tst.put("orange", 200)

    print(tst.get("apple"))
```

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In [ ]: