Linear and Binary Search (Optional)

If you're curious about how linear and binary search look in code, here are a couple of implementations in Python:

```python
1   def linear_search(list, key):
2       """If key is in the list returns its position in the list,
3           otherwise returns -1."""
4       for i, item in enumerate(list):
5           if item == key:
6               return i
7       return -1
8
```

```python
1   def binary_search(list, key):
2       """Returns the position of key in the list if found, -1 otherwise.
3
4       List must be sorted.
5       """
6       left = 0
7       right = len(list) - 1
8       while left <= right:
9           middle = (left + right) // 2
10
11          if list[middle] == key:
12              return middle
13          if list[middle] > key:
14              right = middle - 1
15          if list[middle] < key:
16              left = middle + 1
17      return -1
18
```

Don't worry if this seems complex! Understanding this code isn't required for understanding how to use binary search in troubleshooting.

✓ **Completed**