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For the 'Find Search Term in Books' assessment there were 3 major tasks that needed to be implemented correctly to make the program work properly. The first task was scanning/reading the JSON file. The second task was finding a match for the search term. Lastly, the third task was to give an output representing the result of the program.

To scan the JSON file I implemented a **nested for loop** that will scan the entirety of a JSON file. If the JSON file is empty there is an **if statement** that checks if the JSON file has any values in it and will print to the terminal "JSON File Empty" if it's empty.

To find a matching result I implemented an **if statement** inside the **for loop**. After each line, the program will check if the search term is in the previously scanned line. If it is, then the program will stop the **for loop** and display where was the search term found. If the search term wasn't found the result will show as 'null' and it will print to terminal "No match found".

The output of the program needed to show the search term, ISBN, Page, and Line. The way I implemented this was by creating separate variables for the ISBN, page number, and line; Therefore when there is a match those three variables would be set to the correct values. If there is no match the variables will remain "null".

To test my program I created 5 extra unit tests to make sure that the program is working correctly. The first test *(test number 3)* I tested to see if the program was able to differentiate a word with a capital letter, successful test. The second test *(test number 4)* is a test that doesn't return any matches, successful test. The third test *(test number 5)* was a sanity test making sure the program is running correctly, successful test. The fourth test *(test number 6)* I inserted an empty JSON file that didn't return any matches and printed to the terminal "JSON File Empty", successful test. The fifth test *(test number 7)* I inserted a file with a second book to make sure it could read both books and return a match from the second book, successful test.

```
PASS: Test 1
PASS: Test 2
PASS: Test 3
Received: {
  SearchTerm: 'The',
  Results: [ { ISBN: '9780000528531', Page: 31, Line: 8 } ]
}
No match found
PASS: Test 4
Received: {
  SearchTerm: 'daviary',
  Results: [ { ISBN: null, Page: null, Line: null } ]
}
PASS: Test 5
Received: {
  SearchTerm: 'eyes',
  Results: [ { ISBN: '9780000528531', Page: 31, Line: 10 } ]
}
JSON File Empty
PASS: Test 6
Received: {
  SearchTerm: 'eyes',
  Results: [ { ISBN: null, Page: null, Line: null } ]
}
PASS: Test 7
Received: {
  SearchTerm: 'meaning',
  Results: [ { ISBN: '9780000528532', Page: 3, Line: 3 } ]
}
```