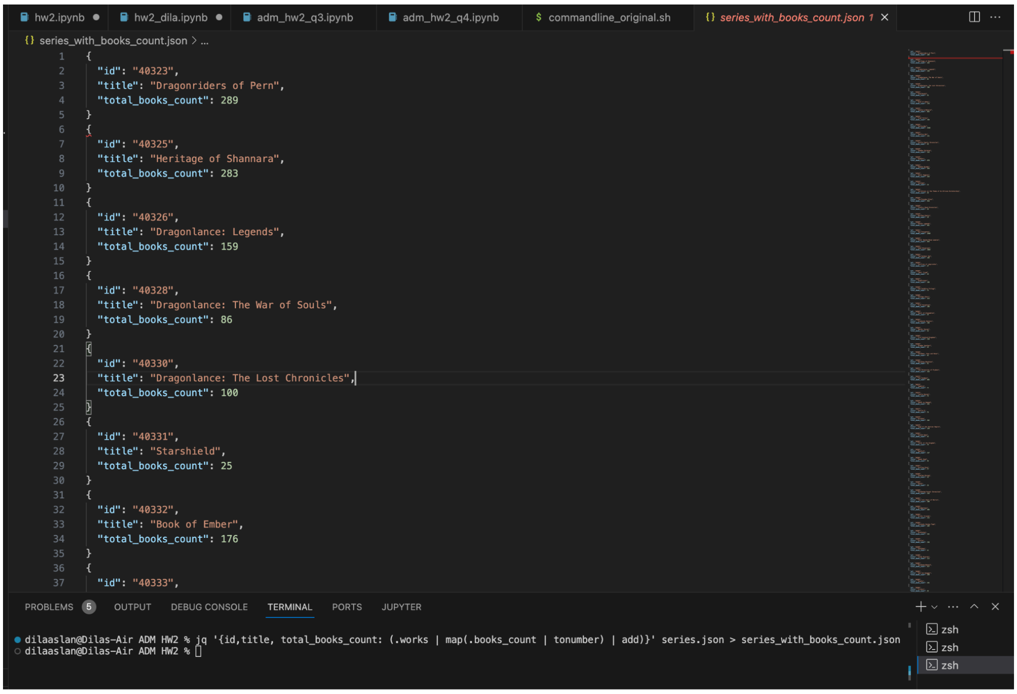
Command Line Question

JQ (https://jqlang.github.io/jq/) is used to read json data from the command line and perform operations on it.

1. First, with the following code, we access the 'books_count' data in the 'works' dictionary and convert it into a numeric value, allowing us to sum the counts of books. After the code runs, a file named 'series_with_books_count.json' will be created.

```
jq '{id,title, total_books_count: (.works | map(.books_count | tonumber) | add)}' series.json > series_with_books_count.json
```

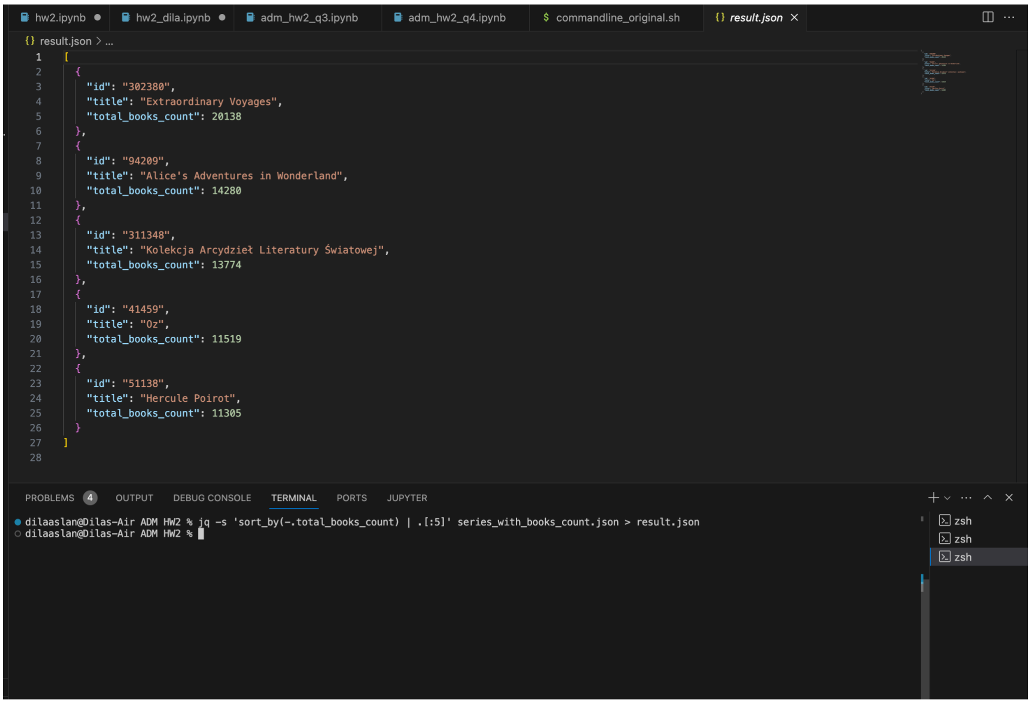


```
{
  "id": "40323",
  "title": "Dragonriders of Pern",
  "total_books_count": 289
}
{
  "id": "40325",
  "title": "Heritage of Shannara",
  "total_books_count": 283
}
{
  "id": "40326",
  "title": "Dragonlance: Legends",
  "total_books_count": 159
}
{
  "id": "40328",
  "title": "Dragonlance: The War of Souls",
  "total_books_count": 86
}
{
  "id": "40330",
  "title": "Dragonlance: The Lost Chronicles",
  "total_books_count": 100
}
{
  "id": "40331",
  "title": "Starshield",
  "total_books_count": 25
}
{
  "id": "40332",
  "title": "Book of Ember",
  "total_books_count": 176
}
{
  "id": "40333",
```

```
dilaaslan@Dilas-Air ADM HW2 % jq '{id,title, total_books_count: (.works | map(.books_count | tonumber) | add)}' series.json > series_with_books_count.json
dilaaslan@Dilas-Air ADM HW2 % 
```

2. Secondly, to find the top 5 highest 'total_books_count,' we sort the 'series_with_books_count.json' file and write the first 5 entries into the 'result.json' file.

```
jq -s 'sort_by(-.total_books_count) | .[:5]' series_with_books_count.json > result.json
```

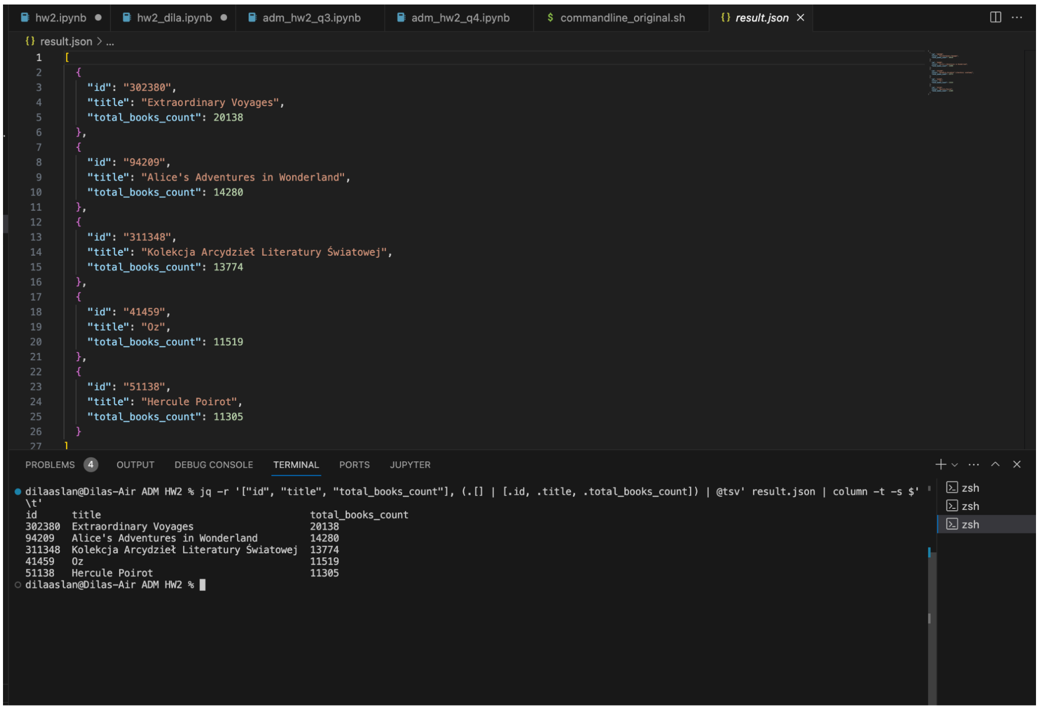


```
[
  {
    "id": "302380",
    "title": "Extraordinary Voyages",
    "total_books_count": 20138
  },
  {
    "id": "94209",
    "title": "Alice's Adventures in Wonderland",
    "total_books_count": 14280
  },
  {
    "id": "311348",
    "title": "Kolekcja Arcydzieł Literatury Światowej",
    "total_books_count": 13774
  },
  {
    "id": "41459",
    "title": "Oz",
    "total_books_count": 11519
  },
  {
    "id": "51138",
    "title": "Hercule Poirot",
    "total_books_count": 11305
  }
]
```

```
dilaaslan@Dilas-Air ADM HW2 % jq -s 'sort_by(-.total_books_count) | .[:5]' series_with_books_count.json > result.json
dilaaslan@Dilas-Air ADM HW2 %
```

3. Finally, we print the results from the 'result.json' file to the console, displaying the relevant values under their respective columns.

```
jq -r '["id", "title", "total_books_count"], (.[] | [.id, .title, .total_books_count]) | @tsv' result.json | column -t -s $'\t'
```

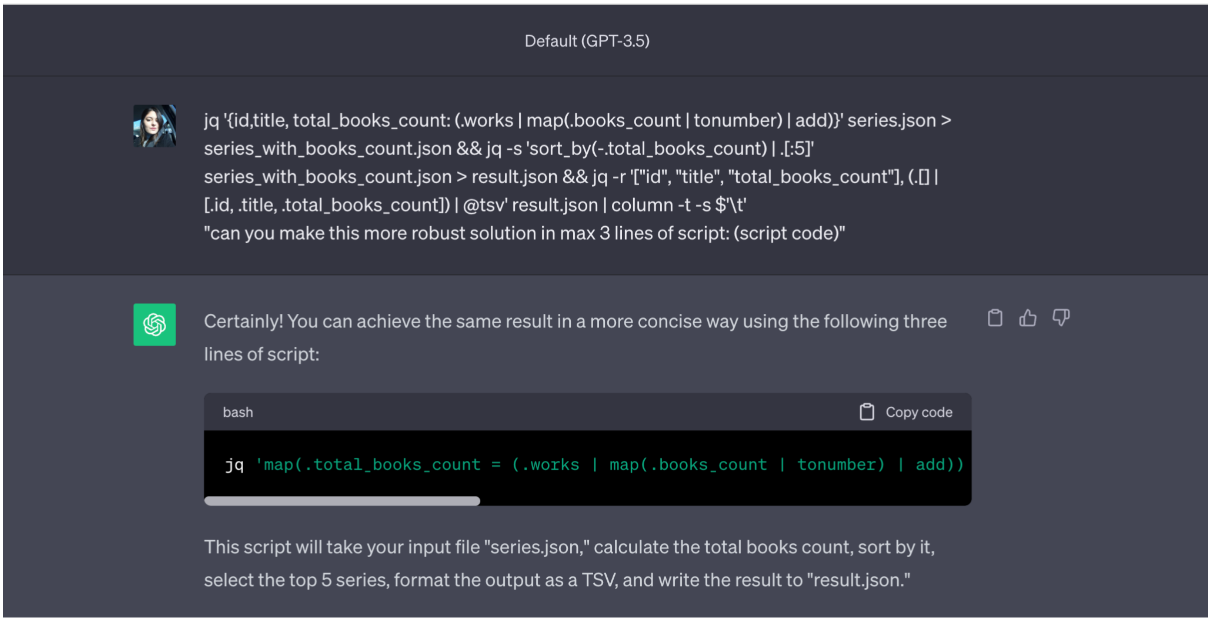


```
[
  {
    "id": "302380",
    "title": "Extraordinary Voyages",
    "total_books_count": 20138
  },
  {
    "id": "94209",
    "title": "Alice's Adventures in Wonderland",
    "total_books_count": 14280
  },
  {
    "id": "311348",
    "title": "Kolekcja Arcydzieł Literatury Światowej",
    "total_books_count": 13774
  },
  {
    "id": "41459",
    "title": "Oz",
    "total_books_count": 11519
  },
  {
    "id": "51138",
    "title": "Hercule Poirot",
    "total_books_count": 11305
  }
]
```

```
dilaaslan@Dilas-Air ADM HW2 % jq -r '["id", "title", "total_books_count"], (.[] | [.id, .title, .total_books_count]) | @tsv' result.json | column -t -s $'
\t'
id      title                                    total_books_count
302380  Extraordinary Voyages                    20138
94209   Alice's Adventures in Wonderland         14280
311348  Kolekcja Arcydzieł Literatury Światowej  13774
41459   Oz                                       11519
51138   Hercule Poirot                           11305
dilaaslan@Dilas-Air ADM HW2 %
```

ChatGPT Answer

When we posed the same question to ChatGPT, the suggested answer provided by ChatGPT was found to be incorrect, as shown below.

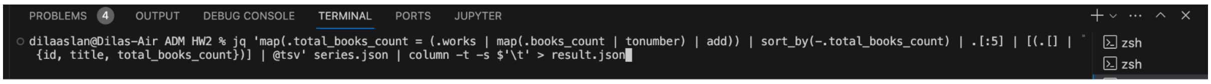


jq '{id,title, total_books_count: (.works | map(.books_count | tonumber) | add)}' series.json >
series_with_books_count.json && jq -s 'sort_by(-.total_books_count) | .[:5]'
series_with_books_count.json > result.json && jq -r '["id", "title", "total_books_count"], (.[] |
[.id, .title, .total_books_count]) | @tsv' result.json | column -t -s $'\t'
"can you make this more robust solution in max 3 lines of script: (script code)"

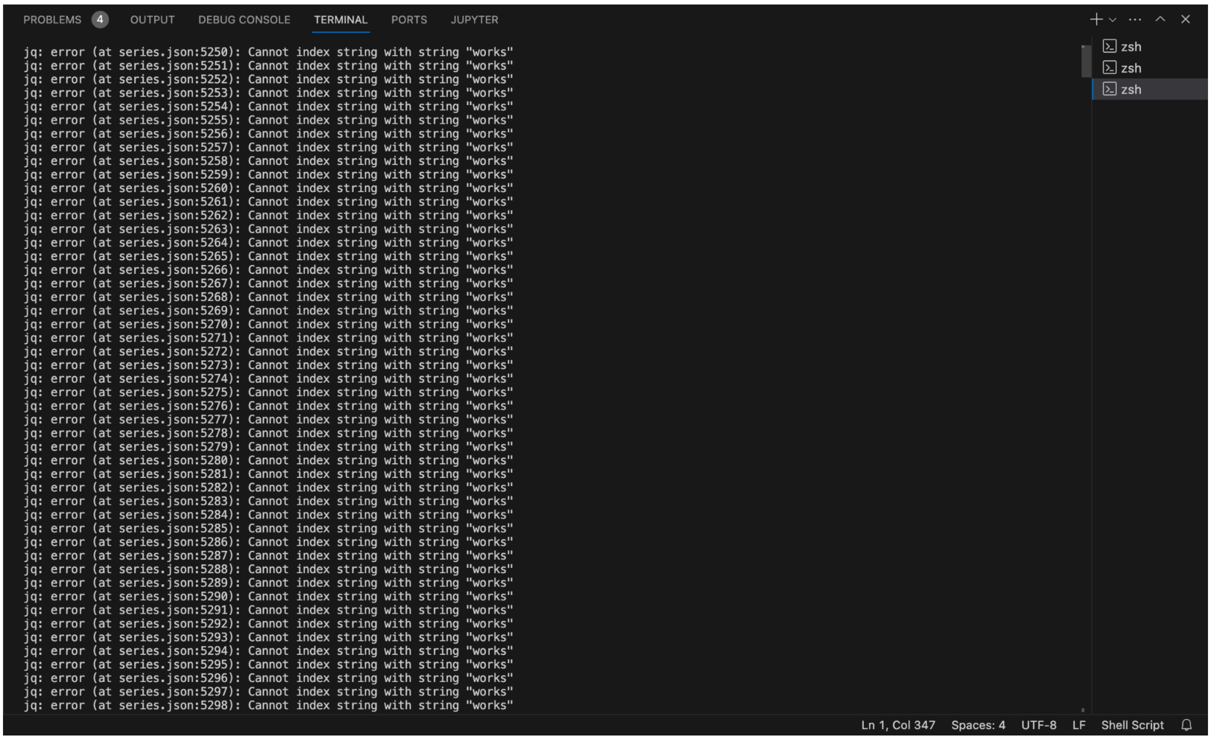
Certainly! You can achieve the same result in a more concise way using the following three lines of script:

```bash
jq 'map(.total_books_count = (.works | map(.books_count | tonumber) | add))
```

This script will take your input file "series.json," calculate the total books count, sort by it, select the top 5 series, format the output as a TSV, and write the result to "result.json."



```
○ dilaaslan@Dilas-Air ADM HW2 % jq 'map(.total_books_count = (.works | map(.books_count | tonumber) | add)) | sort_by(-.total_books_count) | .[:5] | [(.[] |
  {id, title, total_books_count})] | @tsv' series.json | column -t -s $'\t' > result.json
```



```
jq: error (at series.json:5250): Cannot index string with string "works"
jq: error (at series.json:5251): Cannot index string with string "works"
jq: error (at series.json:5252): Cannot index string with string "works"
jq: error (at series.json:5253): Cannot index string with string "works"
jq: error (at series.json:5254): Cannot index string with string "works"
jq: error (at series.json:5255): Cannot index string with string "works"
jq: error (at series.json:5256): Cannot index string with string "works"
jq: error (at series.json:5257): Cannot index string with string "works"
jq: error (at series.json:5258): Cannot index string with string "works"
jq: error (at series.json:5259): Cannot index string with string "works"
jq: error (at series.json:5260): Cannot index string with string "works"
jq: error (at series.json:5261): Cannot index string with string "works"
jq: error (at series.json:5262): Cannot index string with string "works"
jq: error (at series.json:5263): Cannot index string with string "works"
jq: error (at series.json:5264): Cannot index string with string "works"
jq: error (at series.json:5265): Cannot index string with string "works"
jq: error (at series.json:5266): Cannot index string with string "works"
jq: error (at series.json:5267): Cannot index string with string "works"
jq: error (at series.json:5268): Cannot index string with string "works"
jq: error (at series.json:5269): Cannot index string with string "works"
jq: error (at series.json:5270): Cannot index string with string "works"
jq: error (at series.json:5271): Cannot index string with string "works"
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jq: error (at series.json:5275): Cannot index string with string "works"
jq: error (at series.json:5276): Cannot index string with string "works"
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jq: error (at series.json:5278): Cannot index string with string "works"
jq: error (at series.json:5279): Cannot index string with string "works"
jq: error (at series.json:5280): Cannot index string with string "works"
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jq: error (at series.json:5283): Cannot index string with string "works"
jq: error (at series.json:5284): Cannot index string with string "works"
jq: error (at series.json:5285): Cannot index string with string "works"
jq: error (at series.json:5286): Cannot index string with string "works"
jq: error (at series.json:5287): Cannot index string with string "works"
jq: error (at series.json:5288): Cannot index string with string "works"
jq: error (at series.json:5289): Cannot index string with string "works"
jq: error (at series.json:5290): Cannot index string with string "works"
jq: error (at series.json:5291): Cannot index string with string "works"
jq: error (at series.json:5292): Cannot index string with string "works"
jq: error (at series.json:5293): Cannot index string with string "works"
jq: error (at series.json:5294): Cannot index string with string "works"
jq: error (at series.json:5295): Cannot index string with string "works"
jq: error (at series.json:5296): Cannot index string with string "works"
jq: error (at series.json:5297): Cannot index string with string "works"
jq: error (at series.json:5298): Cannot index string with string "works"
```