

Manual Test Plan for sp21-CS242-assignment 2.2

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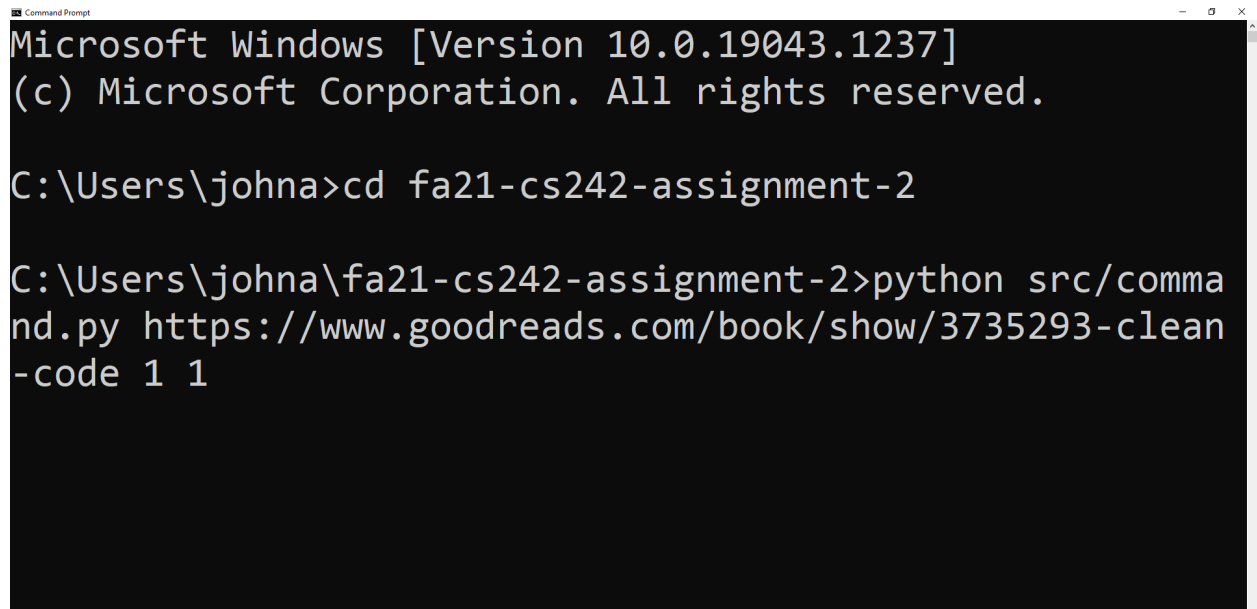
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Environment Setup

- **Python 3.0**
- **unittest**
- **Javascript**
- **HTML**
- **D3 and svg**
- **Eclipse - 4.20.0**
- **Windows 10**

Test - User Input in Command Line Interface

Test-1.1:



```
Microsoft Windows [Version 10.0.19043.1237]
(c) Microsoft Corporation. All rights reserved.

C:\Users\johna>cd fa21-cs242-assignment-2

C:\Users\johna\fa21-cs242-assignment-2>python src/command.py https://www.goodreads.com/book/show/3735293-clean-code 1 1
```

@Test 1.1 Basic Command Line Arguments

- The user must input a minimum of a starting book link, the number of books, and the number of authors to scrape.

Test-1.2:

A screenshot of a Windows Command Prompt window. The title bar at the top reads "Command Prompt". The command prompt shows the following text:

```
C:\Users\johna\fa21-cs242-assignment-2>python src/command.py https://www.goodreads.com/book/show/3735293-clean-code 1 1 -in JsonRead.json
```

The screenshot shows a Windows Command Prompt window with a black background and white text. The title bar at the top says "Command Prompt". The command prompt shows the following text:

```
C:\Users\johna\fa21-cs242-assignment-2>python src/command.py https://www.goodreads.com/book/show/3735293-clean-code 1 1 -in JsonRead.json
```

@Test 1.2 Optional Command Line Argument - JSON File to Read

- The user can input a valid JSON File to read from along with the basic input requirements and send data to the MongoDB database.

Test-1.3:

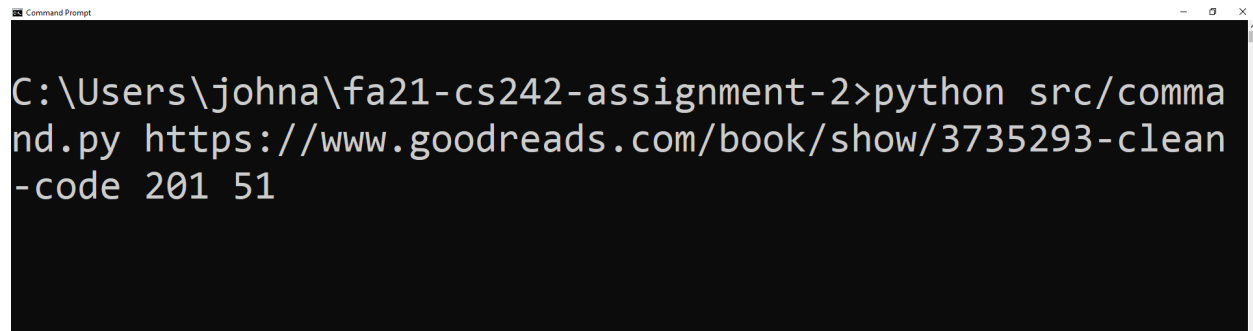
A screenshot of a Windows Command Prompt window. The title bar at the top reads "Command Prompt". The command prompt shows the following command being entered: `C:\Users\johna\fa21-cs242-assignment-2>python src/command.py https://www.goodreads.com/book/show/3735293-clean-code 1 1 -existing https://www.goodreads.com/book/show/3735293-clean-code -out output.json`

```
C:\Users\johna\fa21-cs242-assignment-2>python src/command.py https://www.goodreads.com/book/show/3735293-clean-code 1 1 -existing https://www.goodreads.com/book/show/3735293-clean-code -out output.json
```

@Test 1.3 Optional Command Line Argument - JSON File Export and Existing URL

- The user can also input the optional arguments of an output file of their choice, along with a valid link to the GoodReads website that can be either a book or an author. The data from the database will be exported to the output file if these arguments are supplied.

Test 1.4 - Warning For High Input of Books or Authors

A screenshot of a Windows Command Prompt window. The title bar at the top reads "Command Prompt". The command prompt shows the following text:

```
C:\Users\johna\fa21-cs242-assignment-2>python src/command.py https://www.goodreads.com/book/show/3735293-clean-code 201 51
```

```
C:\Users\johna\fa21-cs242-assignment-2>python src/command.py https://www.goodreads.com/book/show/3735293-clean-code 201 51
```

@Test 1-4

- If a user inputs an amount of books or authors greater than 200 and 50 respectively, the program will print a warning that states that this could be harmful to the website being scraped.

Test 1.5 - Warning For Links Contained within Robots.txt

```
# See http://www.robotstxt.org/robotstxt.html for documentation on how to use the robots.txt file
User-agent: *
Disallow: /about/team_member/
Disallow: /admin
Disallow: /api
Disallow: /blog/list_rss
Disallow: /book/reviews/
Disallow: /book_link/follow/
Disallow: /buy_buttons/
Disallow: /ebooks
Disallow: /event/show/
Disallow: /home/index_rss
Disallow: /oggiPlayerLoader.htm
Disallow: /photo/group/
Disallow: /quotes/list_rss
Disallow: /reader
Disallow: /review/list_rss
Disallow: /review/rate
Disallow: /shelf/user_shelves
Disallow: /story
Disallow: /tooltips
Disallow: /track
Disallow: /trivia/answer
Disallow: /user/updates_rss
Disallow: /book/show/52976360
Disallow: /book/show/53024603
Disallow: /book/show/52667524
Disallow: /book/show/13634645
Disallow: /book/show/53203379
Disallow: /book/show/53472095
Disallow: /book/show/53249757
Disallow: /book/show/50692110
Disallow: /book/show/53451162
Disallow: /book/show/53005407
Disallow: /book/show/50990510
Disallow: /book/show/52558212
Disallow: /book/show/52799562
Disallow: /book/show/53179891
Disallow: /book/show/53245386
Disallow: /book/show/52719017
Disallow: /book/show/53085988
Disallow: /book/show/51038483
Disallow: /book/show/51329187
Disallow: /book/show/53280099
Disallow: /book/show/52717468
Disallow: /book/show/52976361
Disallow: /book/show/53472951
Disallow: /book/show/51108563
Disallow: /book/show/53050699
Disallow: /book/show/51918376
Disallow: /book/show/51434342
Disallow: /book/show/53201597
Disallow: /book/show/53172541
```

@Test 1-5

- If a user inputs a link that is contained within the Robots.txt file of GoodReads.com, the program will print a warning message. Also, during traversal the program will skip over any urls that are within the Robots.txt file.

Test : Scraping/Database Handling

Test 1.6 Basic Program Run

```
Command Prompt

C:\Users\johna\fa21-cs242-assignment-2>python src/command.py https://www.goodreads.com/book/show/3735293-clean-code 1 1
Begin scraping a page
Ended this scrape
Begin scraping a page
Ended this scrape
```

+ Create Database

Q NAMESPACES

▼ GoodReadData

Authors

Books

GoodReadData.Books

COLLECTION SIZE: 2.59KB TOTAL DOCUMENTS: 1 INDEXES TOTAL SIZE: 20KB

Find Indexes Schema Anti-Patterns 0 Aggregation Search Indexes ●

INSERT DOCUMENT

FILTER { field: 'value' } OPTIONS Apply

QUERY RESULTS 1-1 OF 1

```
_id: ObjectId("615125895c60a0ac3c0bd239")
book_url: "https://www.goodreads.com/book/show/3735293-clean-code"
title: "Clean Code: A Handbook of Agile Software Craftsmanship"
book_id: "3735293"
ISBN: "9780132350884"
author_url: "https://www.goodreads.com/author/show/45372.Robert_C_Martin"
author: "Robert C. Martin"
rating: "4.40"
rating_count: "17128"
review_count: "1031"
image_url: "https://i.gr-assets.com/images/S/compressed.photo.goodreads.com/books/..."
similar_books: Array
```

+ Create Database

NAMESPACES

GoodReadData

Authors

Books

GoodReadData.Authors

COLLECTION SIZE: 1.83KB TOTAL DOCUMENTS: 1 INDEXES TOTAL SIZE: 4KB

Find Indexes Schema Anti-Patterns Aggregation Search Indexes

INSERT D

FILTER { field: 'value' } OPTIONS Apply

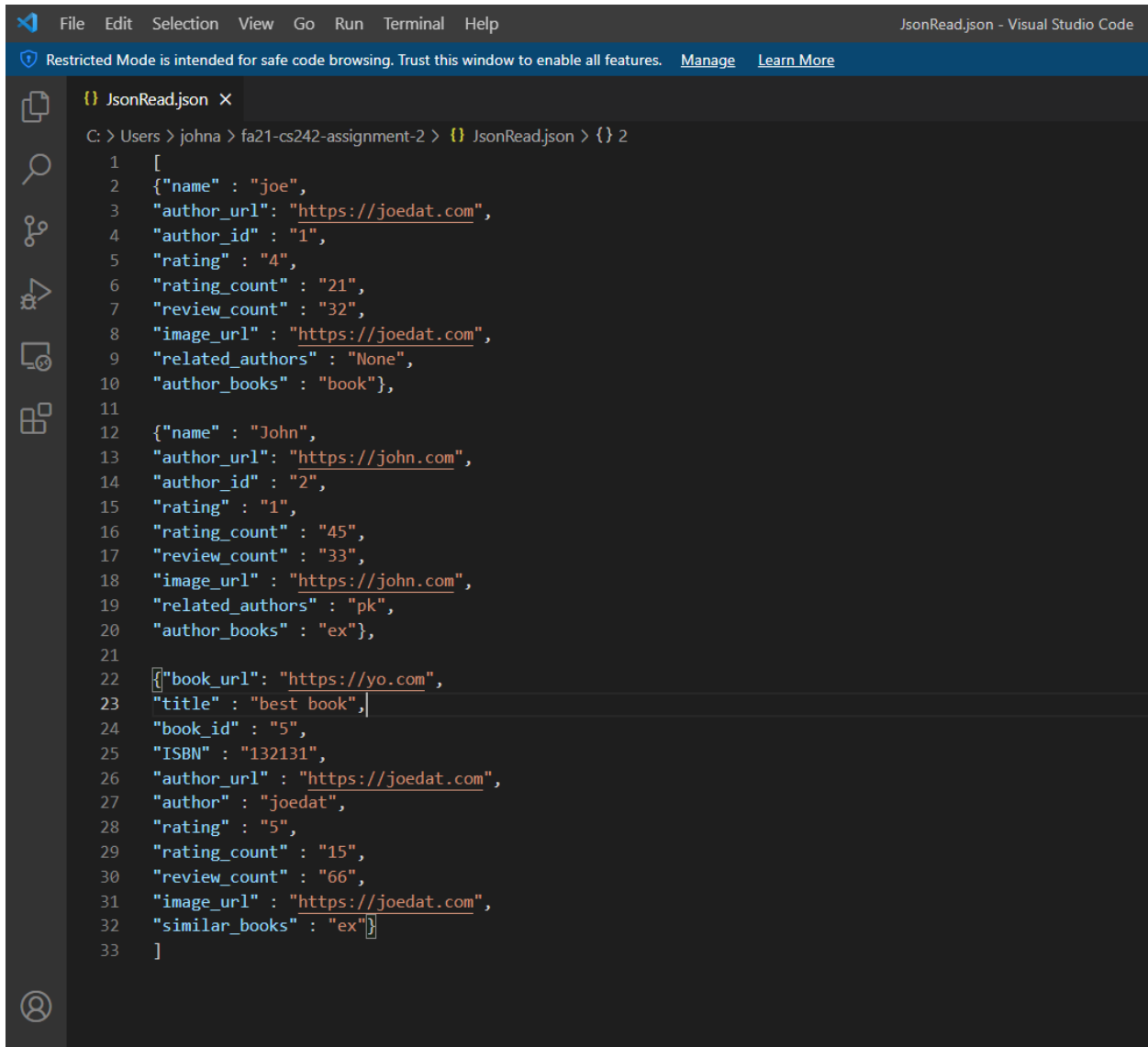
QUERY RESULTS 1-1 OF 1

```
{
  "_id": ObjectId("615125b85c60a0ac3c0bf005"),
  "name": "Robert C. Martin",
  "author_url": "https://www.goodreads.com/author/show/45372.Robert_C_Martin",
  "author_id": "45372",
  "rating": "4.34",
  "rating_count": "31523",
  "review_count": "2094",
  "image_url": "https://images.gr-assets.com/authors/1490470967p5/45372.jpg",
  "related_authors": Array,
  "author_books": Array
}
```

@Test 1.7

- If a user inputs the 3 basic arguments, the program will proceed to handle scraping and transferring of data to the database in that order. The database data is transferred after each unique scrape is completed. Messages are printed to let the user know when each scrape has started or ended. In this case, the user wanted to scrape and transfer 1 author and 1 book, which is in accordance with the contents of the database.

Test 1.8: Optional Argument JSON File to Be Read



```
{} JsonRead.json X
C: > Users > johna > fa21-cs242-assignment-2 > {} JsonRead.json > {} 2
1  [
2  {"name" : "joe",
3   "author_url": "https://joedat.com",
4   "author_id" : "1",
5   "rating" : "4",
6   "rating_count" : "21",
7   "review_count" : "32",
8   "image_url" : "https://joedat.com",
9   "related_authors" : "None",
10  "author_books" : "book"},
11
12  {"name" : "John",
13   "author_url": "https://john.com",
14   "author_id" : "2",
15   "rating" : "1",
16   "rating_count" : "45",
17   "review_count" : "33",
18   "image_url" : "https://john.com",
19   "related_authors" : "pk",
20   "author_books" : "ex"},
21
22  [{"book_url": "https://yo.com",
23   "title" : "best book",
24   "book_id" : "5",
25   "ISBN" : "132131",
26   "author_url" : "https://joedat.com",
27   "author" : "joedat",
28   "rating" : "5",
29   "rating_count" : "15",
30   "review_count" : "66",
31   "image_url" : "https://joedat.com",
32   "similar_books" : "ex"}]
33 ]
```

QUERY RESULTS 1-3 OF 3

```
> _id: ObjectId("615125b85c60a0ac3c0bf005")
  name: "Robert C. Martin"
  author_url: "https://www.goodreads.com/author/show/45372.Robert_C_Martin"
  author_id: "45372"
  rating: "4.34"
  rating_count: "31523"
  review_count: "2094"
  image_url: "https://images.gr-assets.com/authors/1490470967p5/45372.jpg"
  > related_authors: Array
  > author_books: Array
```

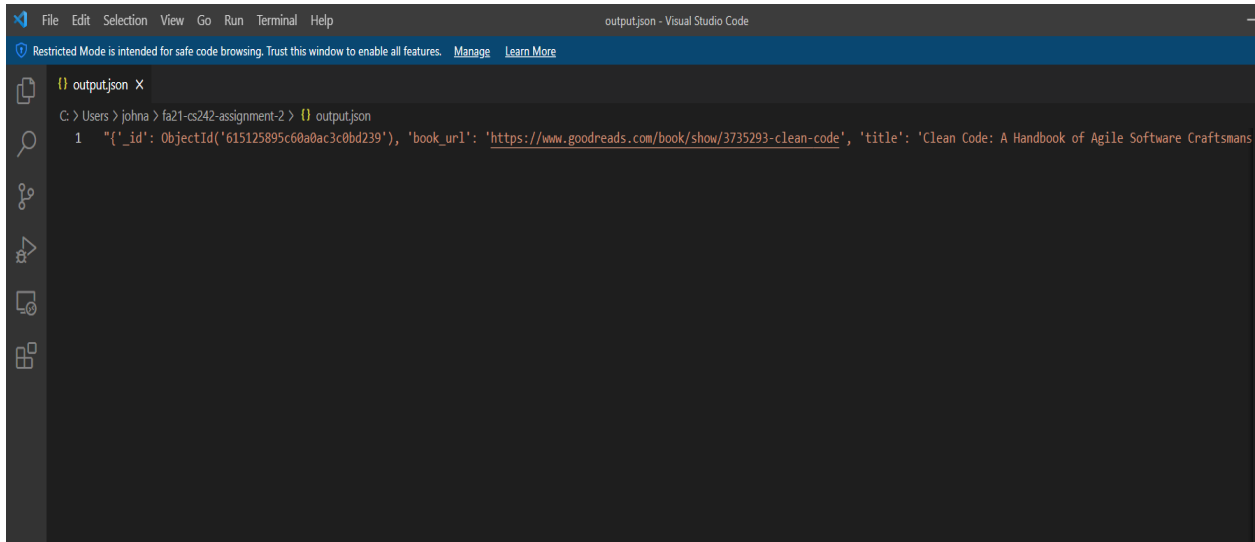
```
_id: ObjectId("615131375c60a0ac3c135b75")
name: "joe"
author_url: "https://joedat.com"
author_id: "1"
rating: "4"
rating_count: "21"
review_count: "32"
image_url: "https://joedat.com"
related_authors: "None"
author_books: "book"
```

```
_id: ObjectId("6151313b5c60a0ac3c135e98")
name: "John"
author_url: "https://john.com"
author_id: "2"
rating: "1"
rating_count: "45"
review_count: "33"
image_url: "https://john.com"
related_authors: "pk"
author_books: "ex"
```

@Test 1.8

- Since the user has added the optional arguments of a JSON file to read from and update the database, the program will read the JSON file given and either create a new entry or update an existing entry in the Database. The database shows that these changes took place when supplied with the extra arguments.

Test 1.9 - Optional Arguments JSON Output File and Existing Data Entry



The screenshot shows the Visual Studio Code interface. The top menu bar includes File, Edit, Selection, View, Go, Run, Terminal, and Help. The title bar indicates the active window is 'output.json - Visual Studio Code'. A blue status bar at the top of the editor area states: 'Restricted Mode is intended for safe code browsing. Trust this window to enable all features. Manage Learn More'. The editor area shows a file named 'output.json' with a single line of JSON data:

```
1  {"_id": ObjectId('615125895c60a0ac3c0bd239'), 'book_url': 'https://www.goodreads.com/book/show/3735293-clean-code', 'title': 'Clean Code: A Handbook of Agile Software Craftsmans'}
```

@Test 1.9

- Since the optional arguments of a JSON output file and link to an existing book or author was supplied, the program will now also read data from the MongoDB database and send the existing entry to a specified output file, which in this case was output.json.

Test - Home Page Route

Test 1.10

← → ↺ 127.0.0.1:5000

Apps Assignments - CS 2...

Enter Book ID to Get:

Get Book

Enter Author ID to Get:

Get Author

Enter a Query to Get:

Get Query

Enter a Book ID to update:

Enter a JSON object with fields to update:

Put a Book

Enter an Author ID to update:

Enter a JSON object with fields to update:

@Test 1.10-Home Page Route Layout

- The home page url supports all API Requests that were implemented from prior weeks and have buttons to execute each command.

Test 1.12 - GET Book Request

```
book_url : https://www.goodreads.com/book/show/3735293-clean-code
title : Clean Code: A Handbook of Agile Software Craftsmanship
book_id : 3735293
ISBN : 9780132350884
author_url : https://www.goodreads.com/author/show/45372.Robert_C_Martin
author : Robert C. Martin
rating : 4.40
rating_count : 123
review_count : 1036
image_url : https://i.gr-assets.com/images/S/compressed.photo.goodreads.com/books/1436202607/13735293._SX318_.jpg
book_id : 3735293
similar_book : https://www.goodreads.com/book/show/4099.The_Pragmatic_Programmer
,
similar_book : https://www.goodreads.com/book/show/85009.Design_Patterns
,
similar_book : https://www.goodreads.com/book/show/44936.Refactoring
,
similar_book : https://www.goodreads.com/book/show/58128.Head_First_Design_Patterns
,
similar_book : https://www.goodreads.com/book/show/34927404-effective-java
,
similar_book : https://www.goodreads.com/book/show/387190.Test_Driven_Development
,
similar_book : https://www.goodreads.com/book/show/4845.Code_Complete
,
similar_book : https://www.goodreads.com/book/show/179133.Domain_Driven_Design
```

@Test 1.12 :

- The GET Book request will print out the object that was requested at the bottom of the page if successful based on the given book ID.
- If a valid request was not made due to any invalid inputs or any other reason, an error will be thrown to the log report at the bottom of the screen for the user.

Test 1.13 - GET Author Request

```
name : Andy Hunt
author_url : https://www.goodreads.com/author/show/2815.Andy_Hunt
author_id : 2815
image_url : https://images.gr-assets.com/authors/1215370372p5/2815.jpg
rating : 4.23
rating_count : 22235
review_count : 1306
related_author : https://www.goodreads.com/author/show/2815.Andy_Hunt
,
related_author : https://www.goodreads.com/author/show/302.Chad_Fowler
,
related_author : https://www.goodreads.com/author/show/3307.Steve_McConnell
,
related_author : https://www.goodreads.com/author/show/25169.Charles_Petzold
,
related_author : https://www.goodreads.com/author/show/25201.Michael_C_Feathers
,
related_author : https://www.goodreads.com/author/show/25215.Martin_Fowler
,
related_author : https://www.goodreads.com/author/show/32731.Eric_Freeman
,
related_author : https://www.goodreads.com/author/show/45372.Robert_C_Martin
```

@Test 1.13 :

- The GET Author request will print out the object that was requested at the bottom of the page if successful based on the given author ID.
- If a valid request was not made due to any invalid inputs or any other reason, an error will be thrown to the log report at the bottom of the screen for the user.

Test 1.14 - GET Query Request

```
name : Andy Hunt
author_url : https://www.goodreads.com/author/show/2815.Andy_Hunt
author_id : 2815
image_url : https://images.gr-assets.com/authors/1215370372p5/2815.jpg
rating : 4.23
rating_count : 22235
review_count : 1306
related_author : https://www.goodreads.com/author/show/2815.Andy_Hunt
,
related_author : https://www.goodreads.com/author/show/302.Chad_Fowler
,
related_author : https://www.goodreads.com/author/show/3307.Steve_McConnell
,
related_author : https://www.goodreads.com/author/show/25169.Charles_Petzold
,
related_author : https://www.goodreads.com/author/show/25201.Michael_C_Feathers
,
related_author : https://www.goodreads.com/author/show/25215.Martin_Fowler
,
related_author : https://www.goodreads.com/author/show/32731.Eric_Freeman
,
related_author : https://www.goodreads.com/author/show/45372.Robert_C_Martin
```

@Test 1.14 :

- The GET Query request will print out the object that was requested at the bottom of the page if successful based on the given query string.
- If a valid request was not made due to any invalid inputs or any other reason, an error will be thrown to the log report at the bottom of the screen for the user.

Test 1-15: PUT Book Request

Enter a Book ID to update:

3735293

Enter a JSON object with fields to update:

{"ISBN":"43211234"}

Put a Book

@Test 1-15:

- If a valid Book Id is given and a valid json object with fields to update are given, the database will update the information specified and the log at the bottom of the page will output success.

Test 1-16: PUT Author Request

Enter an Author ID to update:

2815

Enter a JSON object with fields to update:

{"image_url":"example.com"}

Put an Author

@Test 1-16:

- If a valid Author Id is given and a valid json object with fields to update are given, the database will update the information specified and the log at the bottom of the page will output success.

Test 1-17: POST Book Request

Enter a Book JSON Object to insert:

```
{{"book_url": "dfasdf", "title": "vasdvdsaf", "book_id": "3314", "ISBN": "321314", "author_url": "41312df", "author": "M12313", "rating": "12313", "rating_count": "7123420", "review_co
```

Insert a Book

@Test 1-17:

- If a valid Book json object with all the required fields for a book is given, the database will insert the information specified and the log at the bottom of the page will output success.

Test 1-17: POST Author Request

Enter an Author JSON Object to insert:

```
{{"name": "bob", "author_url": "ht32131", "author_id": "4112", "rating": "5", "rating_count": "312312", "review_count": "32231", "image_url": "https://jo231t.com", "related_authors": "1
```

Insert an Author

Enter a Book ID to Delete:

@Test 1-17:

- If a valid Book json object with all the required fields for a book is given, the database will insert the information specified and the log at the bottom of the page will output success.

Test 1-18 : DELETE Book Request

Enter a Book ID to Delete:

Delete a Book

@Test 1-18:

- If a valid Book ID is given, the database will remove the entry that contains the ID the user has input.
- If the ID is invalid or the request failed, the log will output a delete failure at the bottom of the page.

Test 1-18 : DELETE Author Request

Enter an Author ID to Delete:

Delete an Author

@Test 1-18:

- If a valid Author ID is given, the database will remove the entry that contains the ID the user has input.
- If the ID is invalid or the request failed, the log will output a delete failure at the bottom of the page.

Test - Top K Rated Books

Test 1-19

← → ↻ 127.0.0.1:5000/vis/top-books

Apps Assignments - CS 2...

Get The Top K Rated Books

Enter K number of books to rate:

3

Visualize

@Test 1-19: Top K Rated Books Home Page

- The url with path /vis/top-books contains a text field for user input to enter a number of books to visualize into a graph.
- The graph will only show if the user input is \leq total number of books in the database at the time of the request.

Test 1-20

Get The Top K Rated Books

Enter K number of books to rate:

3

Visualize

Book : 3735293

Book : 4099

Book : 3314

@Test 1-20 : Visualization

- If a user inputs a valid number of books to rate and clicks the Visualize button, the graph depicting the top rated books in descending order is displayed.
- Each entry has its own book ID and contains a unique coloring related to its rating score.

Test - Top K Rated Authors

Test 1-21

Get The Top K Rated Authors

Enter K number of authors to rate:

@Test 1-21: Top K Rated Authors Home Page

- The url with path /vis/top-authors contains a text field for user input to enter a number of authors to visualize into a graph.
- The graph will only show if the user input is \leq total number of books in the database at the time of the request.

Test 1-22

← → ↻ 127.0.0.1:5000/vis/top-authors

Apps Assignments - CS 2...

Get The Top K Rated Authors

Enter K number of authors to rate:

6

Visualize



@Test 1-22 : Visualization

- If a user inputs a valid number of authors to rate and clicks the Visualize button, the graph depicting the top rated authors in descending order is displayed.
- Each entry has its own author ID and contains a unique coloring related to its rating score.