#### Test Plan

1. Prerequisite: python, react, js, flask, d3

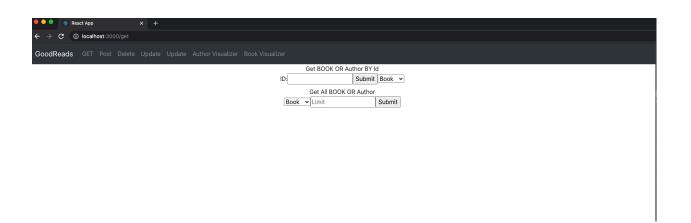
2. Envirment setup and configuration:

A. software: VS code

B. operating system:MacOs

C. hardware:laptop

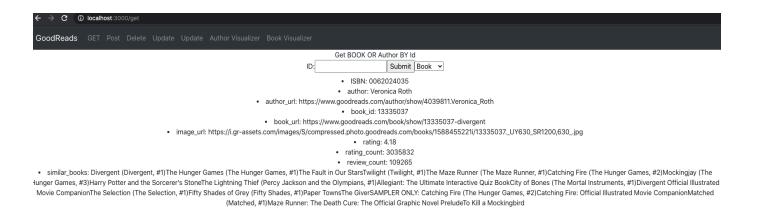
3.



initial screen with get, user can choose either get book info or author info base on ID, user can also choose to get all books or get all authors

### #1 get book by id

I entered book\_id = 13335037 get below result.

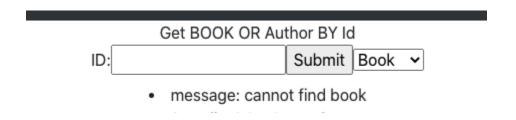


· title: Divergent

it should matched the data in database

#2 get book by invalid id

I entered book\_id = 1 (which is not exist in database) got below result



and error message of cannot find book which is expected.

# #3 get author by id

#### I entered author id = 1077326 result below.

- author\_books: J.K. RowlingHarry Potter and the Sorcerer's StoneHarry Potter and the Deathly Hallows (Harry Potter, #7)Harry Potter and the Prisoner of Azkaban (Harry Potter, #3)Harry Potter and the Chamber of Secrets (Harry Potter, #2)Harry Potter and the Goblet of Fire (Harry Potter, #4)Harry Potter and the Order of the Phoenix (Harry Potter, #5)J.K. RowlingMary GrandPréHarry Potter and the Half-Blood Prince (Harry Potter, #6)The Tales of Beedle the BardHarry Potter Series Box Set (Harry Potter, #1-7)The Casual VacancyHarry PotterJ.K. RowlingFantastic Beasts: The Original ScreenplayJ.K. RowlingPottermore PresentsJ.K. RowlingHarry Potter Persian/Farsi Split-Volume Edition

  J.K. RowlingLey Harry Potter Korean Split-Volume PaperbackJ.K. RowlingActiv. RewlingActiv. RewlineActiv. RewlingActiv. RewlingActiv. RewlingActiv. RewlineAct
  - author\_id: 1077326
  - · author\_url: https://www.goodreads.com/author/show/1077326.J\_K\_Rowling
  - image\_url: https://images.gr-assets.com/authors/1596216614p8/1077326.jpg
    - name: J.K. Rowling
      - rating: 4.46
    - rating\_count: 27048835
  - related\_authors: J.K. RowlingJohn WilliamsDan BrownJane AustenHarper LeeF. Scott FitzgeraldRick RiordanSuzanne CollinsGeorge R.R. MartinJ.R.R. TolkienStephenie MeyerC.S. LewisJohn GreenVeronica RothJohn Tiffany

     review\_count: 607586

#### it should matched the data in database

#4 get book by invalid id

I entered author\_id = 1 (which is not exist in database) got below result

Get BOOK OR Author BY Id							
ID:		Submit	Author <b>∨</b>				

message: cannot find author

and error message of cannot find author which is expected.

# #5 get all author test

Since I have too much data in db, so I set an option to let user choose how many authors they want to display. in below image I enter 100 to get 100 authors.

Get All BOOK OR Author

Author 

100

Submit

#### get below output and it should match my db

#### Get All BOOK OR Author

#### Author ➤ 100

Submit

- · 4: Douglas Adams
- 10: Jude Fisher
- 58: Frank Herbert
- · 60: Gary Russell
- 306: William Golding
  - · 316: Alice Sebold
- 566: Paulo Coelho
- · 569: Khaled Hosseini
- 585: John Steinbeck
- 589: Orson Scott Card
- · 614: Arthur Golden
- 616: John Williams
- 811: Yann Martel
  - 903: Homer
- · 947: William Shakespeare
  - 1049: Elie Wiesel
  - 1050: Mark Haddon
  - · 1194: Richard Dawkins
  - 1235: Jon Krakauer
- · 1315: Louisa May Alcott
- 1455: Ernest Hemingway
  - · 1630: Ray Bradbury
- · 2345: Nicholas Sparks
  - · 2493: Lois Lowry
- 2546: Chuck Palahniuk
- 3275: Jeannette Walls
- 3472: Margaret Atwood
- 3487: Aldous Huxley
- 3565: Oscar Wilde
- 3617: Diana Gabaldon
  - 3720: Anne Frank
- 4178: Cormac McCarthy
- 4711: Sue Monk Kidd
- 4941: Brian Sibley
- 5223: Franz Kafka
- 5687: Irvine Welsh
- 5735: Anthony Burgess
- · 6569: Louis Sachar
- · 6900: Thomas Keneally
- · 7111: Walter Isaacson
  - 7128: Jodi Picoult
  - 7195: John Boyne
  - 7285: Ken Kesey
- 8349: Christopher Paolini
  - 9500: Howard Shore

#### get below output and it should match my db

#### #6 get all books test

Since I have too much data in db, so I set an option to let user choose how many authors they want to display. in below image I enter 50 to get 50 books and the output should match my db

 message: cannot find author Get All BOOK OR Author

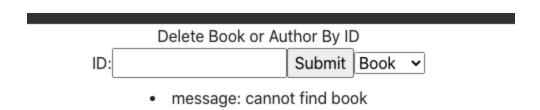


Subm

- 960: Angels & Demons
- · 1618: The Curious Incident of the Dog in the Night-Time
  - . 2165: The Old Man and the Sea
    - 4981: Slaughterhouse-Five
    - 5129: Brave New World
  - · 5297: The Picture of Dorian Gray
    - · 6185: Wuthering Heights
    - · 7144: Crime and Punishment
      - 8852: Macbeth
      - 10210: Jane Eyre
  - 13496: A Game of Thrones
  - · 22628: The Perks of Being a Wallflower
    - 24178: Charlotte's Web
    - 28187: The Lightning Thief
    - 38447: The Handmaid's Tale
      - 49552: The Stranger
  - · 100915: The Lion, the Witch and the Wardrobe
    - 113436: Eragon
    - 135836: Trainspotting
  - 136251: Harry Potter and the Deathly Hallows
    - 157993: The Little Prince
    - 231804: The Outsiders
    - · 256683: City of Bones
  - 386162: The Hitchhiker's Guide to the Galaxy
    - · 485894: The Metamorphosis
- 2223324: Harry Potter and the Chamber of Secrets: Sheet Music for Flute with C.D
  - · 2429135: The Girl with the Dragon Tattoo
    - 3263607: The Fellowship of the Ring
  - 3609760: Twilight: The Complete Illustrated Movie Companion
    - 6148028: Catching Fire
    - 6186357: The Maze Runner
      - 6442769: Paper Towns
  - 6466909: New Moon: The Complete Illustrated Movie Companion
- 7723151: The Twilight Saga: New Moon: Music from the Motion Picture Soundtrack
  - 9593742: The Twilight Saga: Eclipse
    - 10507293: The Selection
    - · 10818853: Fifty Shades of Grey
      - 13335037: Divergent
      - 15745753: Eleanor & Park
  - 15749186: To All the Boys I've Loved Before
    - 17157681: The Hobbit, Part One
      - 17347634: Me Before You
    - 18114322: The Grapes of Wrath
      - 18144590: The Alchemist

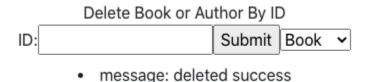
#6 delete book by id (invalid input)

I enter a invalid book id= 1, so got error message of cannot find book



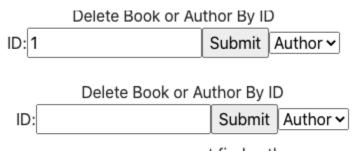
#7 delete book by id (valid input)

I enter a invalid book id= 13335037, so got success message of deleted success



#8 delete author by id (invalid input)

I enter a invalid author id= 1, so got error message of cannot find author



· message: cannot find author

# #9 delete author by id (valid input)

# I enter a invalid author ID, so got success message of deleted success

Delete Book or Author By ID							
ID: 1077326	Submit Author ~						
Delete Book or Au	ithor By ID						
ID:	Submit Author ~						
message: delete	ed success						

# #9 search with double quotes" " should output exact match

# Search book.book\_id:"438456 Submit

- ISBN: 1506708137
- author: Faith Erin Hicks
  author\_url: https://www.goodreads.com/author/show/996558.Faith\_Erin\_Hicks
  - book\_id: 438456053
- book\_url: https://www.goodreads.com/book/show/43845605-imbalance-part-3
- image\_url: https://i.gr-assets.com/images/S/compressed.photo.goodreads.com/books/1549389961i/43845605\_UY630\_SR1200,630\_ipg
  - rating: 4.31
  - rating\_count: 1742
  - review\_count: 105
- similar\_books: Imbalance, Part 3 (Avatar: The Last Airbender: Imbalance, #3)Avatar: The Last Airbender: North and South, Part 2 (North and South, #3)Avatar: The Last Airbender: North and South, Part 2 (North and South, #3)Avatar: The Last Airbender: North and South, Part 3 (Smoke and Shadow, #3)Avatar: The Last Airbender Smoke and Shadow, Part 3 (Smoke and Shadow, Part 3 (Smoke and Shadow, Part 3 (Fine Rift, #3)Avatar: The Last Airbender The Rift, Part 2 (The Rift, #3)Avatar: The Last Airbender The Rift, Part 3 (The Rift, #3)Avatar: The Last Airbender The Rift, Part 3 (The Rift, #3)Avatar: The Last Airbender The Rift, Part 3 (The Rift, #3)Avatar: The Last Airbender The Search, Part 3 (The Rift, #3)Avatar: The Last Airbender The Search, Part 3 (The Search, #3)Avatar: The Last Airbender The Search, Part 1 (The Search, #3)Avatar: The Last Airbender The Search, Part 1 (The Search, #1)The Legend of Korra: Ruins of the Empire, #3)Avatar: The Last Airbender The Promise, #2)Avatar: The Last Airbender: The Lost Airbender: North Airbender: The Lost Airbender: North Airbender: Nort
  - title: Imbalance, Part 3

#### #10 search with : operator will output all data contains the words

GoodReads										
								Search		
								author.author_id:15	Submit	
<ul> <li>author_nan</li> </ul>	ne: Cha	rlotte B	rontëLoi	iisa May A	lcottRick	RiordanCassa	ndra ClareHa	al Leonard CorporationJen	ny HanAshle	nlee VanceJerry A. CoyneMatt RidleySean CarrollRandall MunroeCarl ZimmerStephen R.
				C	oveyChar	les DuhiggGa	ylan D. Wrigh	tKendra ElliotMary Burton	Adele Abbo	ottGregg DunnettMira GrantCamilla Bruce

#11 search with AND operator (input:book.book\_id:438456053ANDISBN:1506708137) #12 search with Not operator

# Search book.book\_id:4384560 Submit

book\_title: Imbalance, Part 3Imbalance, Part 3Imbala

(input:book.book\_id:NOT438456053)

Search
book.book\_id:NOT4384 Submit

• book\_title: Jane EyreWuthering HeightsThe AlchemistAngels & DemonsThe Picture of Dorian GrayThe Girl with the Dragon TattooBrave New WorldThe Girl on the TrainThe Little PrinceThe Hitchhiker's Guide to the GalaxyThe MetamorphosisSapiens: A Brief History of HumankindA Clockwork OrangeThe Old Man and the SeaThe StrangerA Game of ThronesThe Handmaid's TaleSlaughterhouse-FiveFrankenstein: The 1818

TextCrime and PunishmentFifty Shades of Grey

#13 search with > operator (input:book.review\_count:>1000)

Search
book.review\_count:>10 Submit

• book\_title: Jane EyreWuthering HeightsThe AlchemistAngels & DemonsThe Picture of Dorian GrayThe Girl with the Dragon TattooBrave New WorldThe Girl on the TrainThe Little PrinceThe Hitchhiker's Guide to the GalaxyThe MetamorphosisSapiens: A Brief History of HumankindA Clockwork OrangeThe Old Man and the SeaThe StrangerA Game of ThronesThe Handmaid's TaleSlaughterhouse-FiveFrankenstein: The 1818

TextCrime and PunishmentFifty Shades of Grey

#14 search with > operator (input:book.review count:<100)

Search
book.review\_count:<10 Submit

# #15 post author post a new author info and got message of success it should match my db

Post Author								
testAuthor	22	2222	22	22	22	177	22	Submit

message: success

#### my db result show below, it add a new author name "testAuthor"

```
QUERY RESULTS 1-1 OF 1

_id: ObjectId("60501ad7099f628d2825c15a")
name: "testAuthor"
author_uf: "2"
rating: "2222"
rating: count: "22"
review, count: "22"
image_uf: "22"
related_authors: "22"
author_books: "22"
```

#16 post book post a new book info and got message of success it should match my db

book\_title: Harry Potter and the Chamber of Secrets: Sheet Music for Flute with C.DThe Twilight Saga: EclipseThe Twilight Saga: New Moon: Music from the Motion Picture SoundtrackLong Walk To FreedomThe Lord of the Rings: The Two Towers (The Lord of the Rings, #2)The Lord of the Rings: Weapons and WarfareThe Lord of the Rings: The Making of the Movie TrilogyAllegiant: The Ultimate Interactive Quiz BookSAMPLER ONLY: Catching Fire (The Hunger Games, #2)Catching Fire: Official Illustrated Movie CompanionMaze Runner: The Death Cure: The Official Graphic Novel PreludeThree Roads To Quantum GravityEinstein's UniverseAbout Time: Einstein's Unfinished RevolutionThe End of Time: The Next Revolution in Our Understanding of the UniverseStephen Hawking's Universe: The Cosmos ExplainedBeyond Einstein: The Cosmic Quest for the Theory of the UniverseThe Cosmic Landscape: String Theory and the Illusion of Intelligent DesignEvolution: The Triumph of an IdeaOn the Shoulders of Giants: The Great Works of Physics and AstronomyWhat Evolution Is



my db result show below, it add a new title "testBook"

```
GUERY RESULTS 1-1 OF 1

_id: ObjectId("60501c71099f628d2825c15c")
book_url: "11"
    title: "testBook"
    book_id: "111"
    ISBN: "11"
    author: "11"
    author_url: "11"
    rating: "11"
    rating_count: "11"
    review_count: "11"
    image_url: "11"
    similar_books: "11"
```

#17 test scrape will return success if success posted

#18 test put book, user has the option of what attribute they want to update. below I choose update with ISBN= 0142437205, the original data show below

```
_id: ObjectId("603ca68bfb6ef196de492eba")
 book_url: "https://www.goodreads.com/book/show/10210.Jane_Eyre"
 title: "Jane Eyre"
 book_id: "10210"
 ISBN: "0142437204"
 author_url: "https://www.goodreads.com/author/show/1036615.Charlotte_Bront_"
 author: "Charlotte Brontë"
 rating: 4.13
 rating_count: 1684047
 review_count: 44314
 image_url: "https://i.gr-assets.com/images/S/compressed.photo.goodreads.com/books/..."
> similar_books: Array
                                       Update Book
  Upate Book Attribute ISBN
                                  0142437205
                                                          10210
                                                                                Submit

    message: success updated
```

got message of success updated

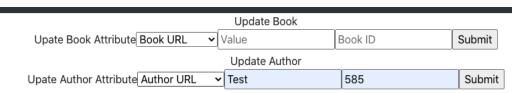
check db and the db has been updated as shown below

```
Python Software Developer at Old Mission
Capital, LLC. Click to learn more.

title: "Jane Eyre"
book_id: "10210"
ISBN: "0142437205"
author_url: "https://www.goodreads.com/author/show/1036615.Charlotte_Bront_"
author: "Charlotte Brontë"
rating: 4.13
rating_count: 1684047
review_count: 44314
image_url: "https://i.gr-assets.com/images/S/compressed.photo.goodreads.com/books/..."
> similar_books: Array
```

#19 test put author, user has the option of what attribute they want to update. below I choose update with author\_url= Test, the original data show below

```
_id: ObjectId("603ca600fb6ef196de48ec12")
name: "John Steinbeck"
author_url: "https://www.goodreads.com/author/show/585.John_Steinbeck"
author_id: "585"
rating: 3.94
rating_count: 3882772
review_count: 110581
image_url: "https://images.gr-assets.com/authors/1182118389p8/585.jpg"
> related_authors: Array
> author_books: Array
```



message: success updated

data after updated

```
_id: ObjectId("603ca600fb6ef196de48ec12")
name: "John Steinbeck"
author_url: "Test"
author_id: "585"
rating: 3. 94
rating_count: 3882772
review_count: 110581
image_url: "https://images.gr-assets.com/authors/1182118389p8/585.jpg"
> related_authors: Array
> author_books: Array
```

		To	Top K Highest Rated authorss.		
	K:	10	)		Submit
A.J. Rivers : 4.19					
Adele Abbott : 4.22					
Albert Camus : 4.01					
Albert Einstein: 4.07					
Albrecht Fölsing : 4.39					
Aldous Huxley : 3.99					
Alex Bellos : 4.1					
Alexander Gordon Smith : 4.18					
Alexis Schaitkin : 3.46					
Alice Sebold : 3.8					

	Top K Highest Rated b	ooks.
K:		Submit
1776 : 4.06		
1984 : 4.19		
"Surely You're Joking, Mr. Feynman!": Adventures of a Curious Charac	ter : 4.26	
1491: New Revelations of the Americas Before Columbus : 4		
666 Park Avenue : 3.24		