



Armazenamento de Dados em Ambientes Distribuídos (ADAD)

Mestrado em Engenharia de Telecomunicações e Informática (METI)

Grupo 2:

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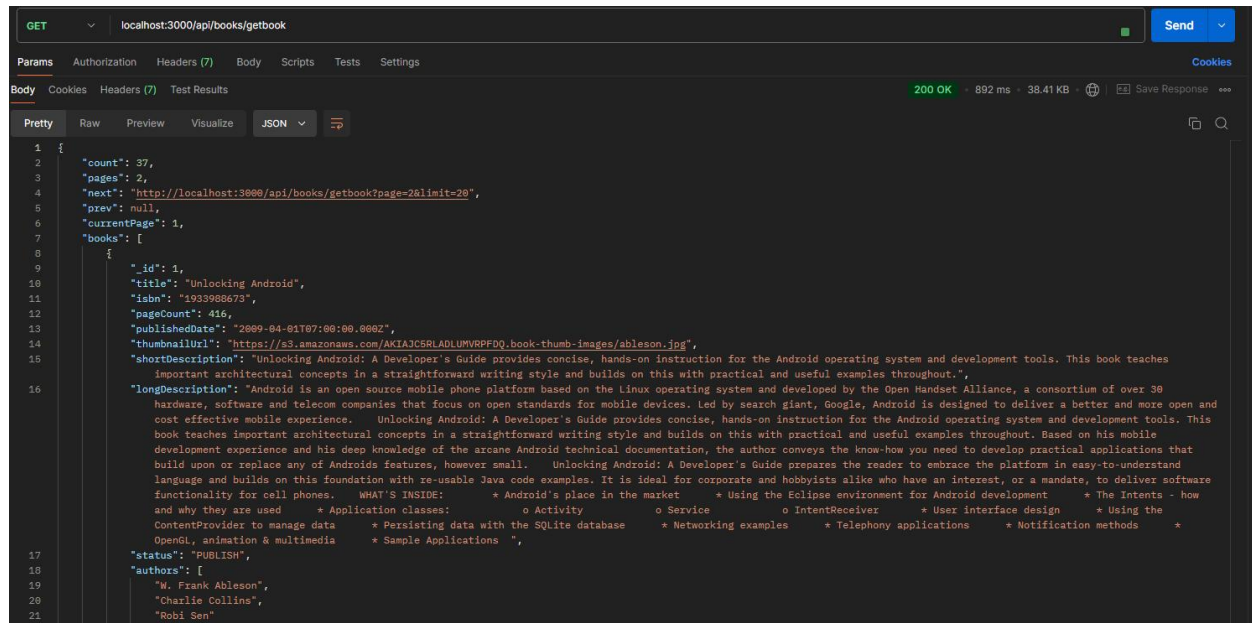
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Leonardo Milheiro Ferreira De Carvalho 131481

# Endpoints

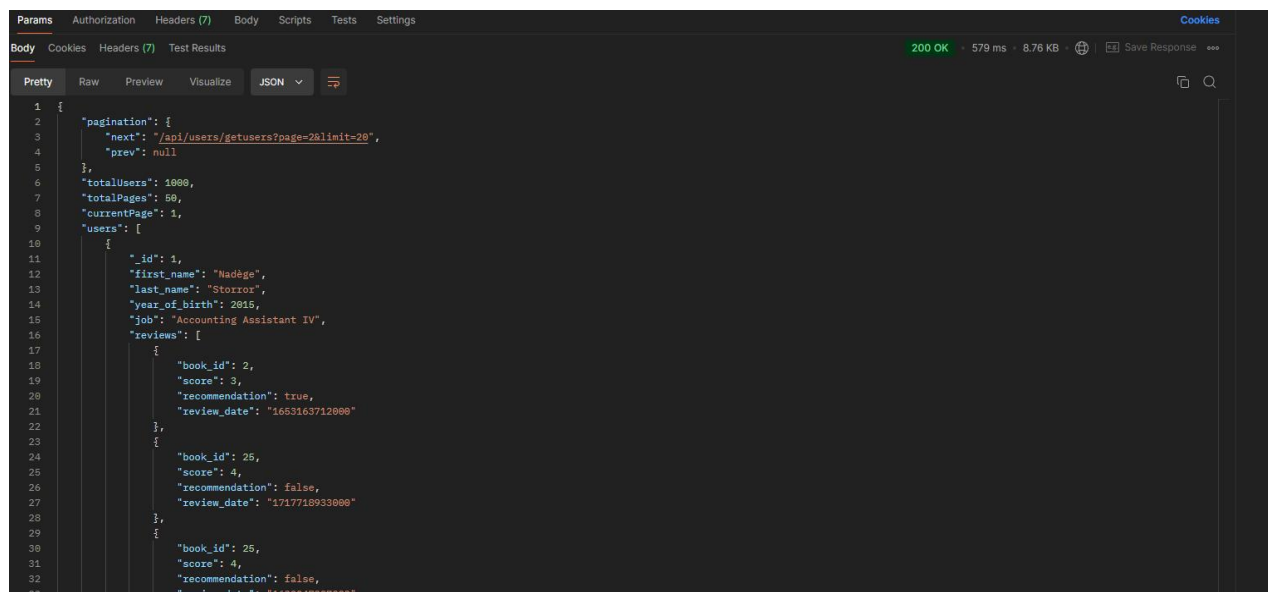
## 1-Lista de livros com paginação.

Get localhost:3000/api/books/getbook



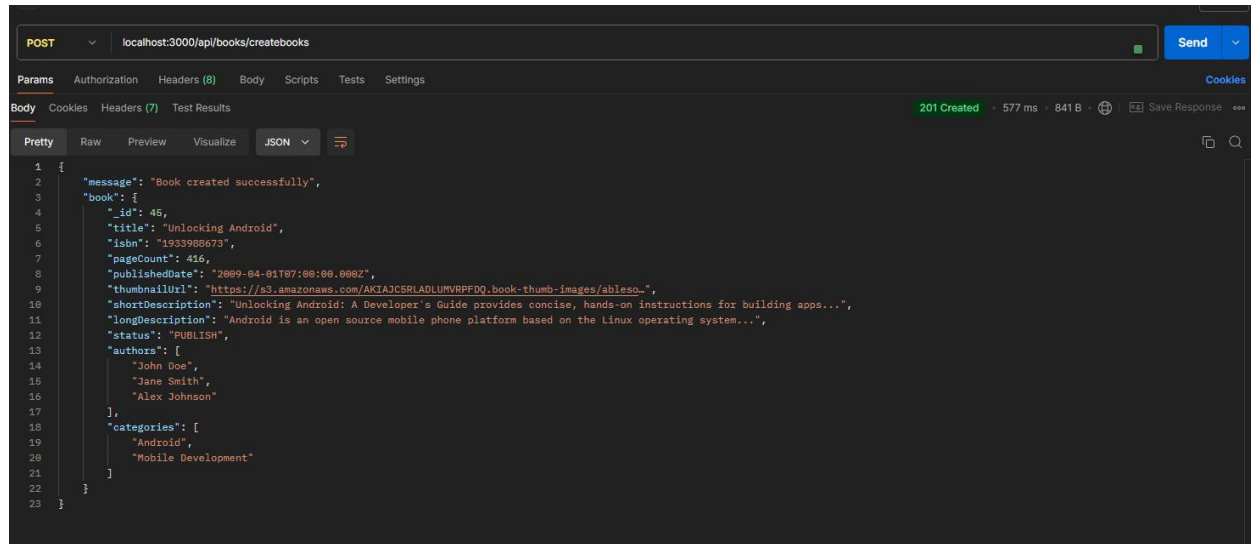
## 2-Lista de users com paginação.

Get localhost:3000/api/users/getusers



## 3-Adicionar 1 ou vários livros.

## Post localhost:3000/api/books/createbooks



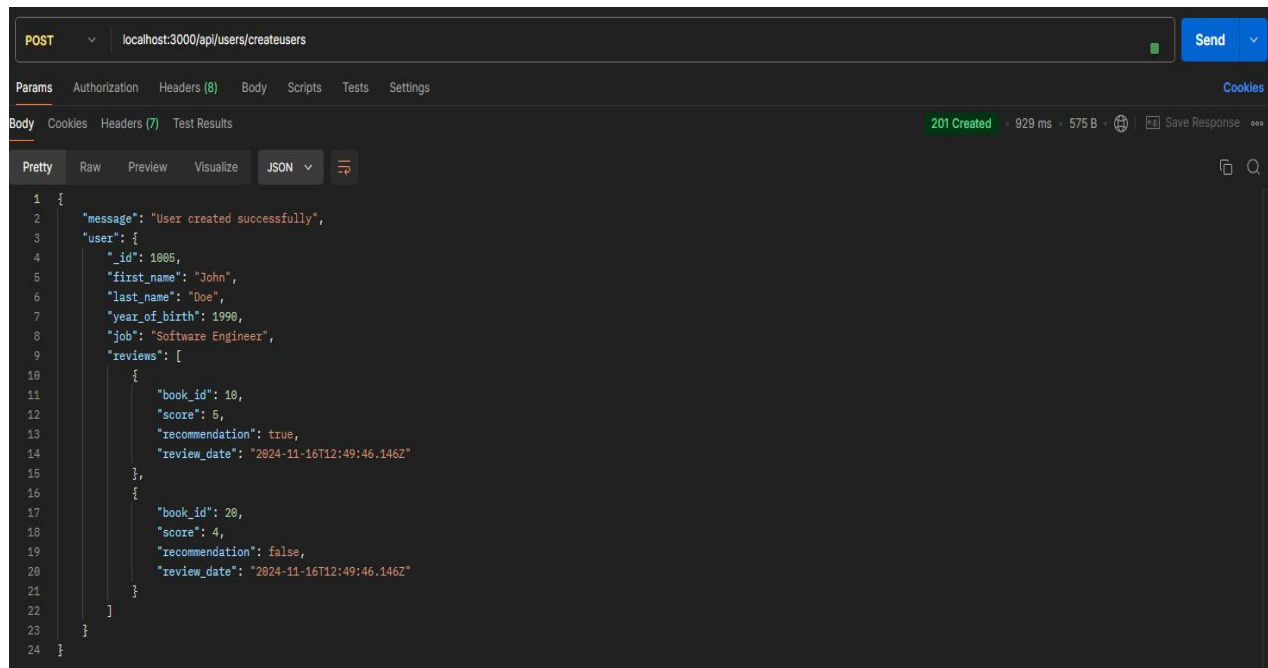
POST localhost:3000/api/books/createbooks

201 Created · 577 ms · 841 B

```
1 {
2   "message": "Book created successfully",
3   "book": {
4     "id": 45,
5     "title": "Unlocking Android",
6     "isbn": "1933988673",
7     "pageCount": 416,
8     "publishedDate": "2009-04-01T07:00:00.000Z",
9     "thumbnailUrl": "https://s3.amazonaws.com/AKIAJC5RLADLUMVRPFDQ-book-thumb-images/ables0-",
10    "shortDescription": "Unlocking Android: A Developer's Guide provides concise, hands-on instructions for building apps...",
11    "longDescription": "Android is an open source mobile phone platform based on the Linux operating system...",
12    "status": "PUBLISH",
13    "authors": [
14      "John Doe",
15      "Jane Smith",
16      "Alex Johnson"
17    ],
18    "categories": [
19      "Android",
20      "Mobile Development"
21    ]
22  }
23 }
```

## 4-Adicionar 1 ou vários utilizadores.

## Post localhost:3000/api/users/createusers



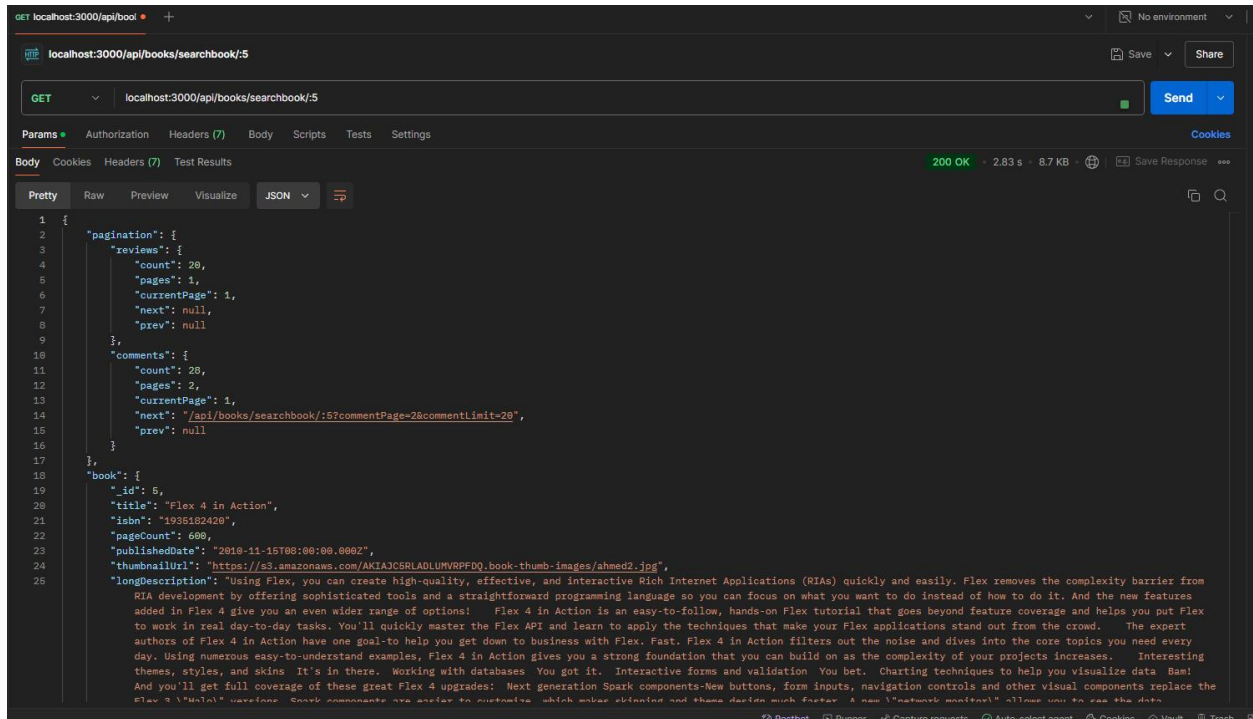
POST localhost:3000/api/users/createusers

201 Created · 929 ms · 575 B

```
1 {
2   "message": "User created successfully",
3   "user": {
4     "id": 1005,
5     "first_name": "John",
6     "last_name": "Doe",
7     "year_of_birth": 1990,
8     "job": "Software Engineer",
9     "reviews": [
10      {
11        "book_id": 10,
12        "score": 5,
13        "recommendation": true,
14        "review_date": "2024-11-16T12:49:46.146Z"
15      },
16      {
17        "book_id": 20,
18        "score": 4,
19        "recommendation": false,
20        "review_date": "2024-11-16T12:49:46.146Z"
21      }
22    ]
23  }
24 }
```

## 5-Pesquisar pelo \_id(books).

Get localhost:3000/api/books/searchbook/:id

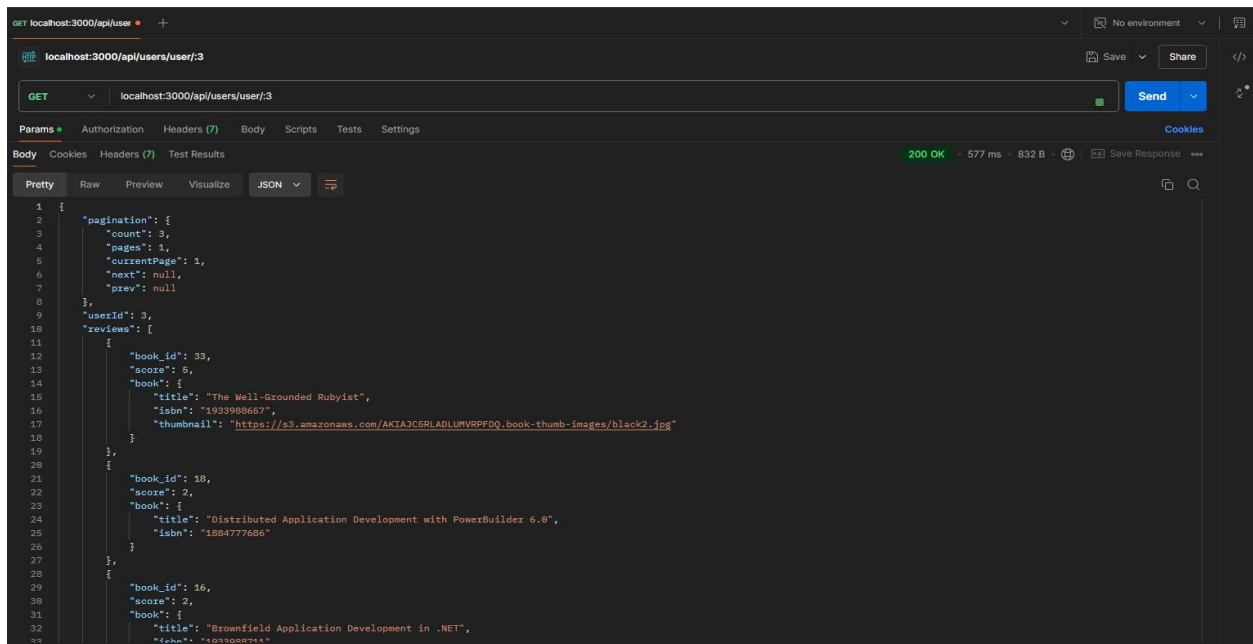


```
GET localhost:3000/api/books/searchbook/5

{
  "pagination": {
    "reviews": {
      "count": 20,
      "pages": 1,
      "currentPage": 1,
      "next": null,
      "prev": null
    },
    "comments": {
      "count": 20,
      "pages": 2,
      "currentPage": 1,
      "next": "/api/books/searchbook/:id?commentPage=2&commentLimit=20",
      "prev": null
    }
  },
  "book": {
    "_id": 5,
    "title": "Flex 4 in Action",
    "isbn": "1936182420",
    "pageCount": 600,
    "publishedDate": "2010-11-15T08:00:00.000Z",
    "thumbnailUrl": "https://s3.amazonaws.com/AKIAJCSRLADLUMVRPFDQ-book-thumb-images/ahmed2.jpg",
    "longDescription": "Using Flex, you can create high-quality, effective, and interactive Rich Internet Applications (RIAs) quickly and easily. Flex removes the complexity barrier from RIA development by offering sophisticated tools and a straightforward programming language so you can focus on what you want to do instead of how to do it. And the new features added in Flex 4 give you an even wider range of options! Flex 4 in Action is an easy-to-follow, hands-on Flex tutorial that goes beyond feature coverage and helps you put Flex to work in real day-to-day tasks. You'll quickly master the Flex API and learn to apply the techniques that make your Flex applications stand out from the crowd. The expert authors of Flex 4 in Action have one goal-to help you get down to business with Flex. Fast. Flex 4 in Action filters out the noise and dives into the core topics you need every day. Using numerous easy-to-understand examples, Flex 4 in Action gives you a strong foundation that you can build on as the complexity of your projects increases. Interesting themes, styles, and skins It's in there. Working with databases You got it. Interactive forms and validation You bet. Charting techniques to help you visualize data Bam! And you'll get full coverage of these great Flex 4 upgrades: Next generation Spark components-New buttons, form inputs, navigation controls and other visual components replace the Flex 3 \"Mala\" namespace. Smart components are easier to maintain, which makes them more flexible and more powerful. A new \"Native\" namespace allows you to see the data."
  }
}
```

## 6-Pesquisar pelo \_id(users)

Get localhost:3000/api/users/user/:id

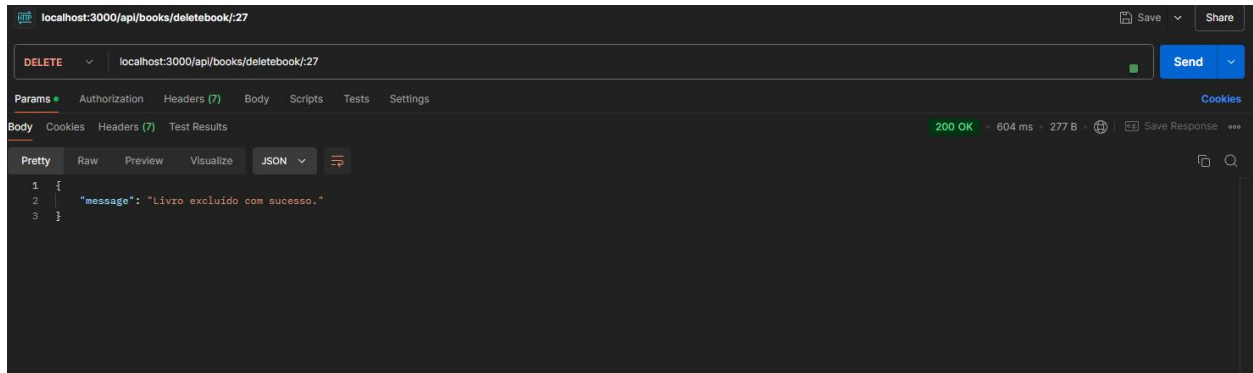


```
GET localhost:3000/api/users/user/3

{
  "pagination": {
    "count": 3,
    "pages": 1,
    "currentPage": 1,
    "next": null,
    "prev": null
  },
  "userId": 3,
  "reviews": [
    {
      "book_id": 33,
      "score": 5,
      "book": {
        "title": "The Well-Founded Rubyist",
        "isbn": "1933988667",
        "thumbnail": "https://s3.amazonaws.com/AKIAJCSRLADLUMVRPFDQ-book-thumb-images/black2.jpg"
      }
    },
    {
      "book_id": 18,
      "score": 2,
      "book": {
        "title": "Distributed Application Development with PowerBuilder 6.0",
        "isbn": "1884777686"
      }
    },
    {
      "book_id": 10,
      "score": 2,
      "book": {
        "title": "Brownfield Application Development in .NET",
        "isbn": "1884777686"
      }
    }
  ]
}
```

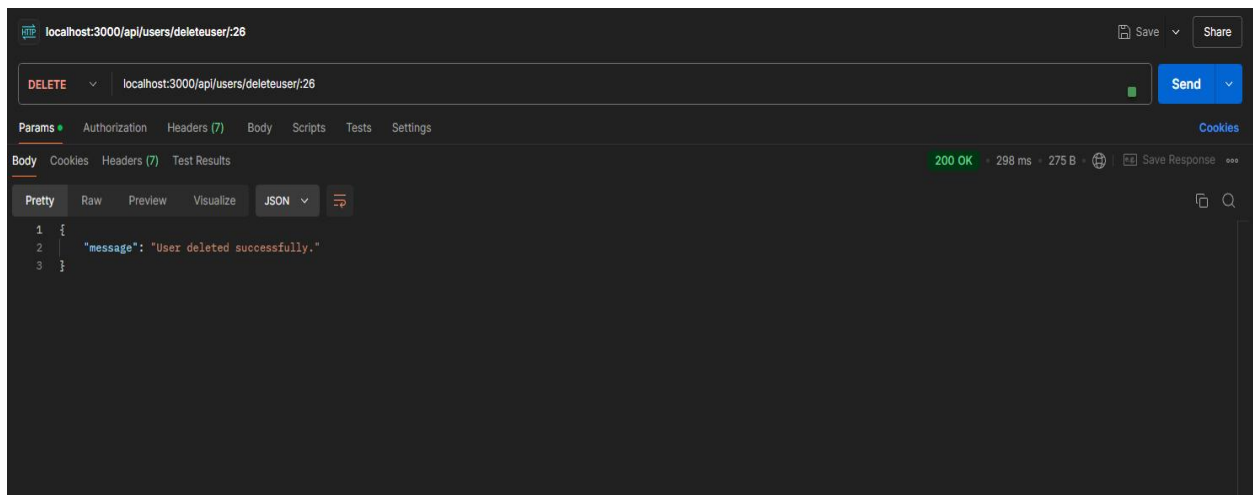
## 7-Remover livro pelo *\_id*

Delete localhost:3000/api/books/deletebook/:id



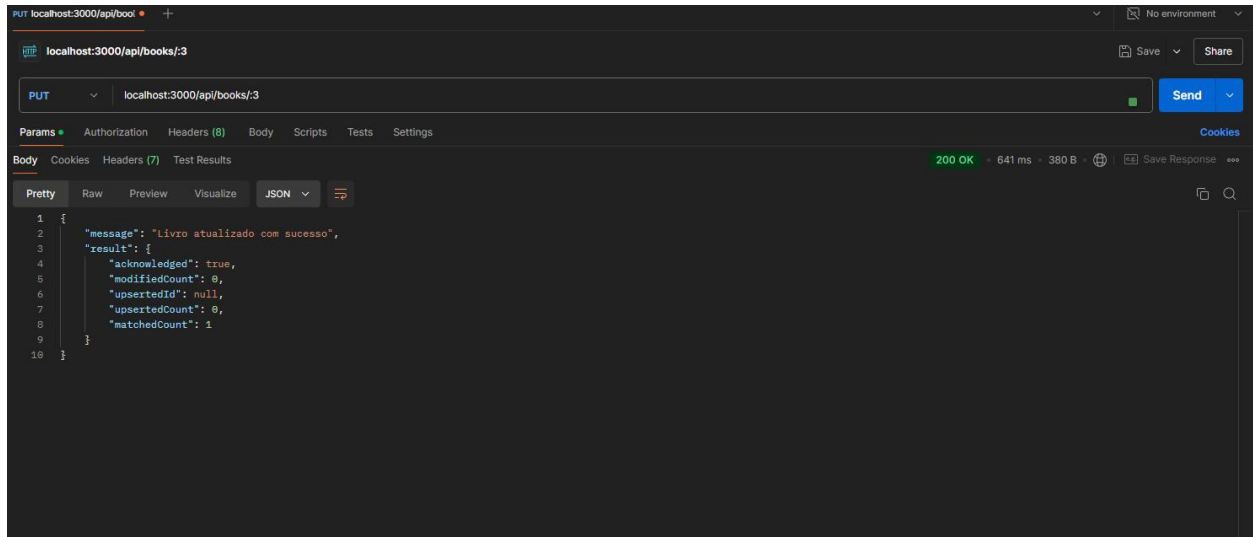
## 8-Remover user pelo *\_id*

Delete localhost:3000/api/users/deleteuser/:id



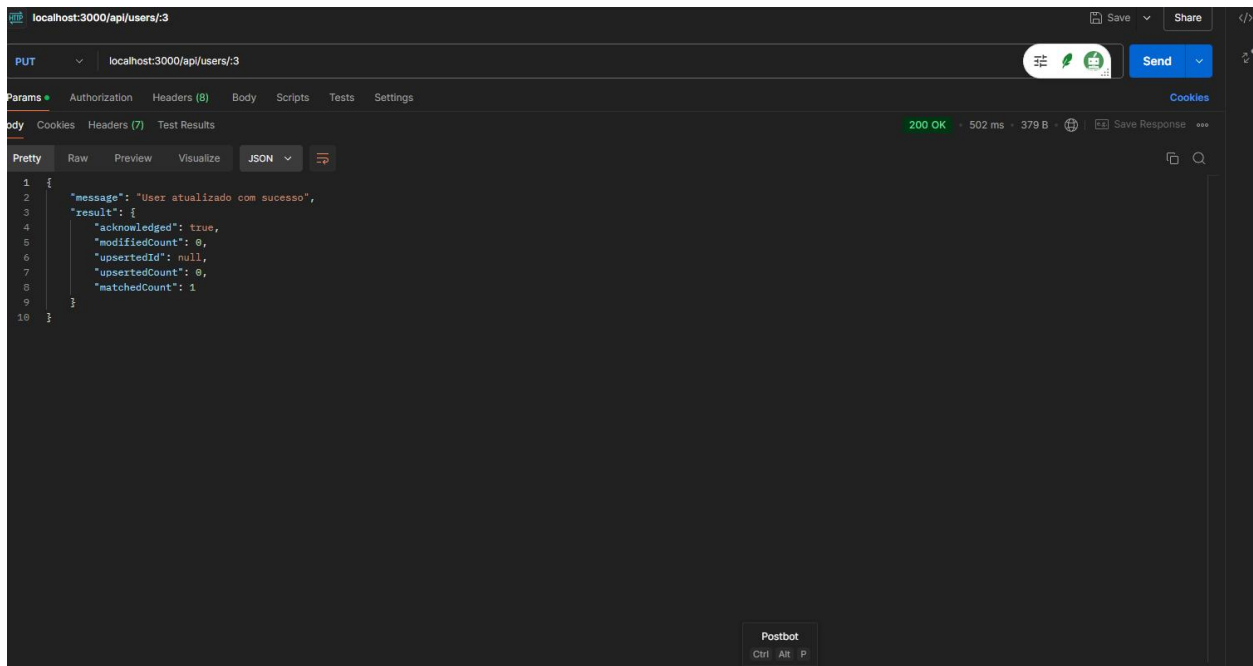
## 9-Update livro

PUT localhost:3000/api/books/:id



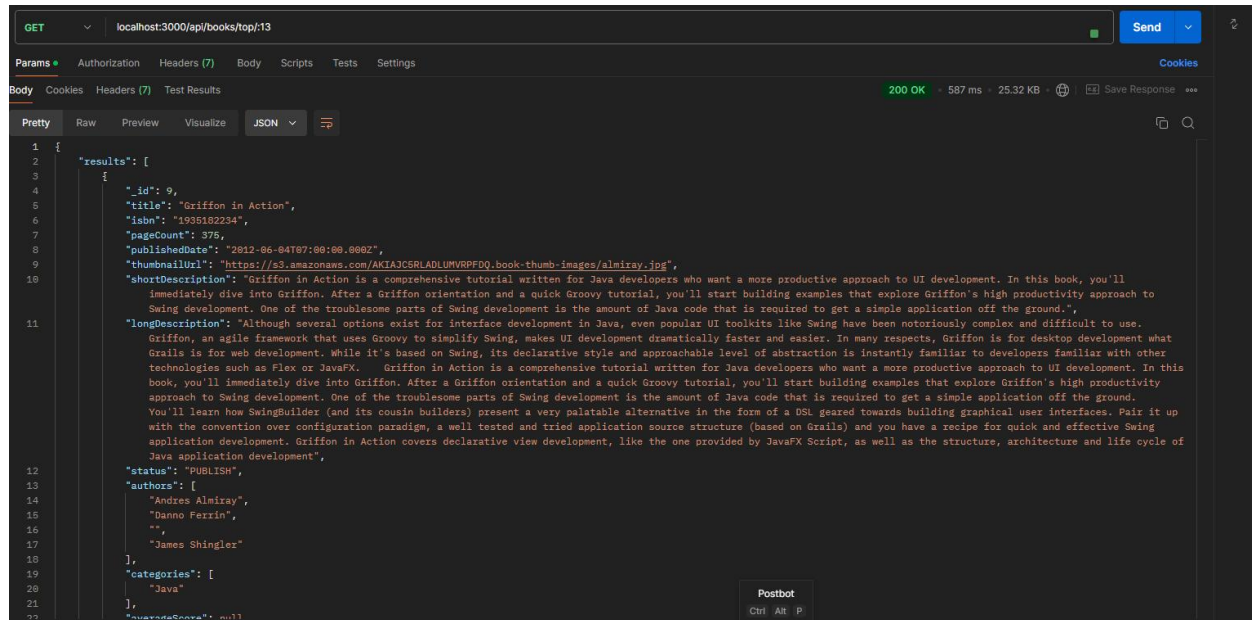
## 10-Update user

PUT localhost:3000/api/users/:id



11-Lista de livros com maior **score** (pela média), por ordem decendente.

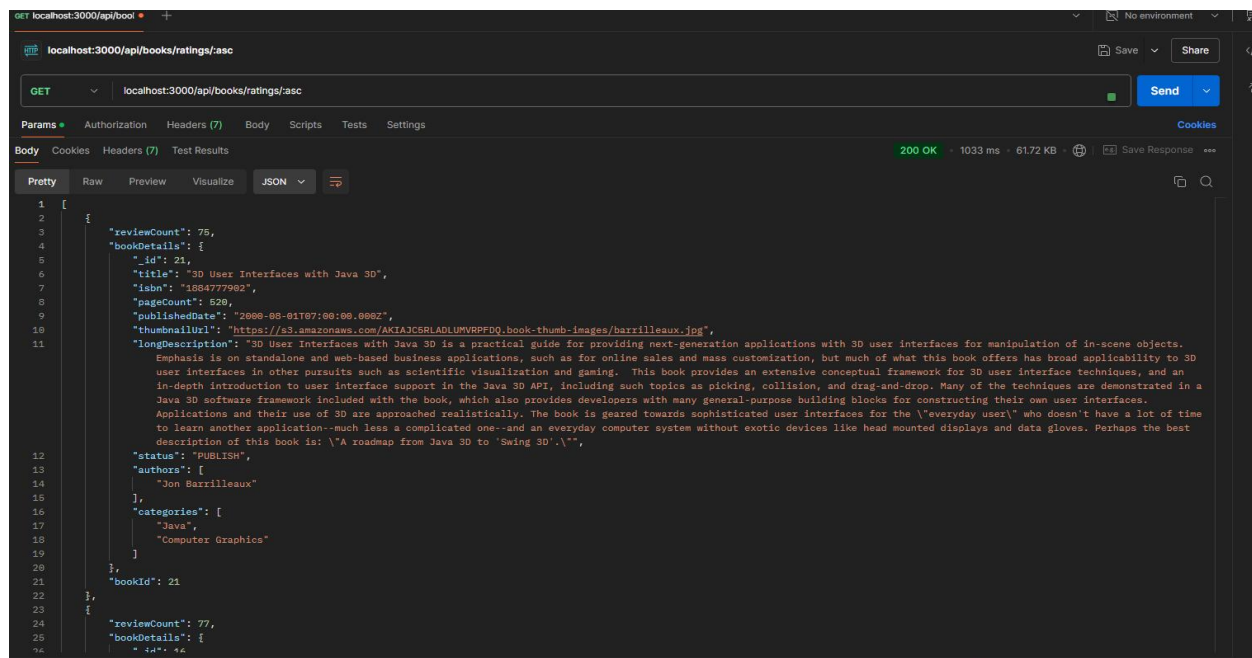
Get localhost:3000/api/books/top/:id



12-Lista de livros ordenado pelo número total de **reviews**

:order - “asc” or “desc”

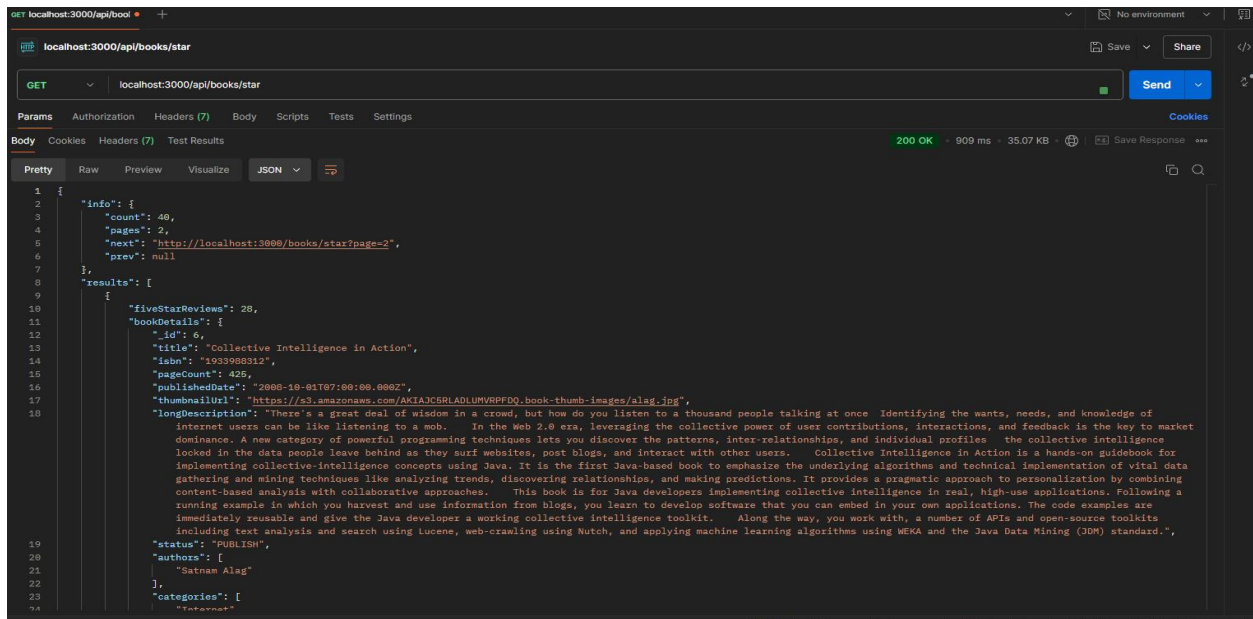
GET localhost:3000/api/books/ratings/:asc





13-Lista de livros com mais 5 estrelas. Mostrar toda a informação do livro e o número de reviews igual a 5

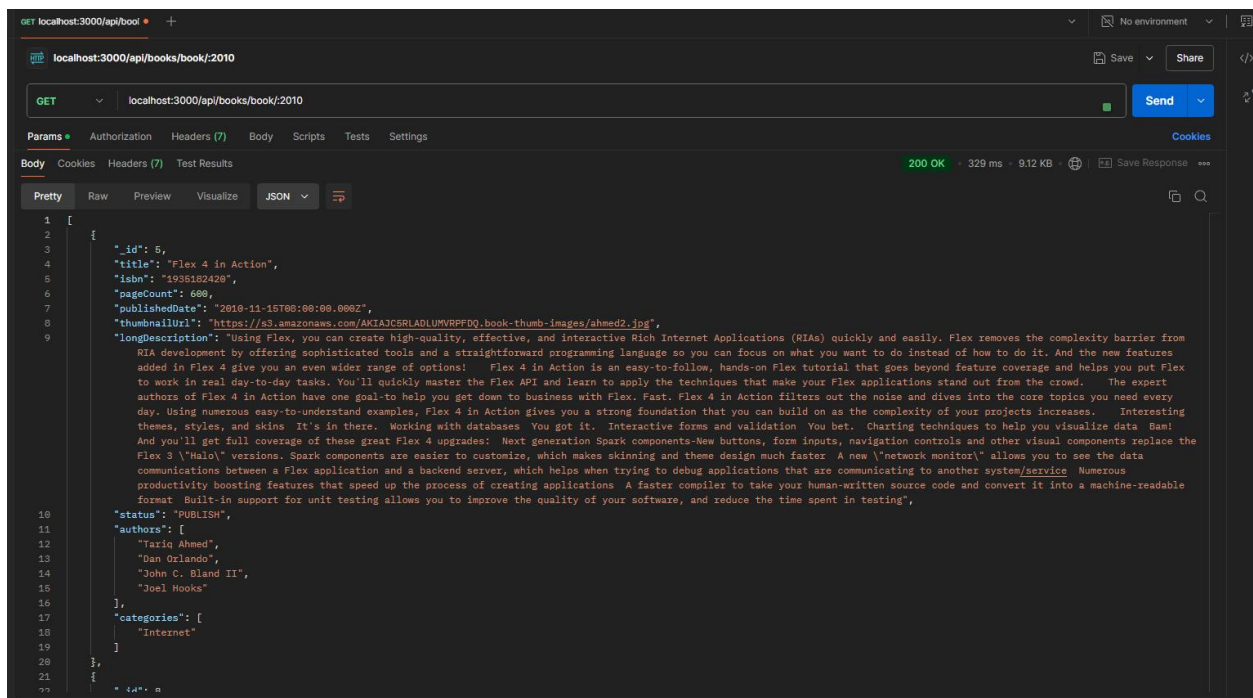
GET localhost:3000/api/books/star



```
1 {
2   "info": {
3     "count": 40,
4     "pages": 2,
5     "next": "http://localhost:3000/books/star?page=2",
6     "prev": null
7   },
8   "results": [
9     {
10      "fiveStarReviews": 28,
11      "bookDetails": {
12        "_id": 6,
13        "title": "Collective Intelligence in Action",
14        "isbn": "933988032",
15        "pageCount": 426,
16        "publishedDate": "2000-10-01T07:00:00.000Z",
17        "thumbnailUrl": "https://s3.amazonaws.com/AKIAJCSRLADLUMVRPFDQ_book-thumb-images/alag.jpg",
18        "longDescription": "There's a great deal of wisdom in a crowd, but how do you listen to a thousand people talking at once? Identifying the wants, needs, and knowledge of internet users can be like listening to a mob. In the Web 2.0 era, leveraging the collective power of user contributions, interactions, and feedback is the key to market dominance. A new category of powerful programming techniques lets you discover the patterns, inter-relationships, and individual profiles the collective intelligence locked in the data people leave behind as they surf websites, post blogs, and interact with other users. Collective Intelligence in Action is a hands-on guidebook for implementing collective-intelligence concepts using Java. It is the first Java-based book to emphasize the underlying algorithms and technical implementation of vital data gathering and mining techniques like analyzing trends, discovering relationships, and making predictions. It provides a pragmatic approach to personalization by combining content-based analysis with collaborative approaches. This book is for Java developers implementing collective intelligence in real, high-use applications. Following a running example in which you harvest and use information from blogs, you learn to develop software that you can embed in your own applications. The code examples are immediately reusable and give the Java developer a working collective intelligence toolkit. Along the way, you work with a number of APIs and open-source toolkits including text analysis and search using Lucene, web-crawling using Nutch, and applying machine learning algorithms using WEKA and the Java Data Mining (JDM) standard.",
19        "status": "PUBLISH",
20        "authors": [
21          "Satnam Alag"
22        ],
23        "categories": [
24          "Internet"
25        ]
26      }
27    }
28  ]
29 }
```

14-Lista de livros avaliados no ano {year}

GET localhost:3000/api/books/book/:year

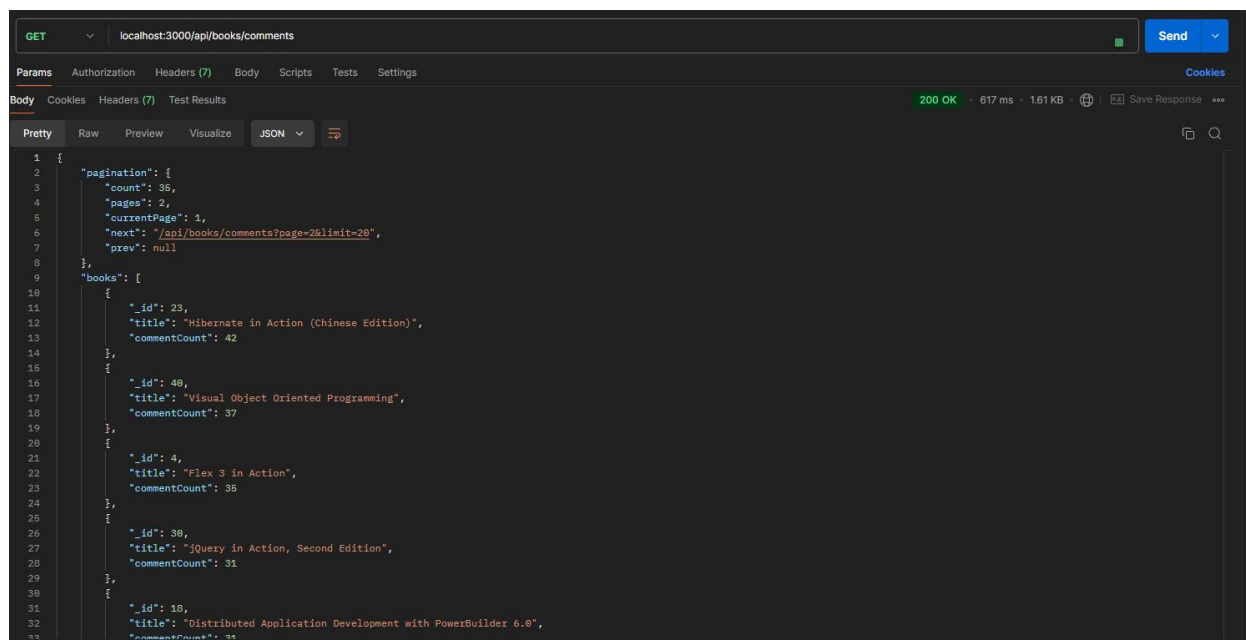


```
1 [
2   {
3     "_id": 5,
4     "title": "Flex 4 in Action",
5     "isbn": "1935102420",
6     "pageCount": 600,
7     "publishedDate": "2010-11-15T00:00:00.000Z",
8     "thumbnailUrl": "https://s3.amazonaws.com/AKIAJCSRLADLUMVRPFDQ_book-thumb-images/ahmed2.jpg",
9     "longDescription": "Using Flex, you can create high-quality, effective, and interactive Rich Internet Applications (RIAs) quickly and easily. Flex removes the complexity barrier from RIA development by offering sophisticated tools and a straightforward programming language so you can focus on what you want to do instead of how to do it. And the new features added in Flex 4 give you an even wider range of options! Flex 4 in Action is an easy-to-follow, hands-on Flex tutorial that goes beyond feature coverage and helps you put Flex to work in real day-to-day tasks. You'll quickly master the Flex API and learn to apply the techniques that make your Flex applications stand out from the crowd. The expert authors of Flex 4 in Action have one goal to help you get down to business with Flex. Fast. Flex 4 in Action filters out the noise and dives into the core topics you need every day. Using numerous easy-to-understand examples, Flex 4 in Action gives you a strong foundation that you can build on as the complexity of your projects increases. Interesting themes, styles, and skins. It's in there. Working with databases. You got it. Interactive forms and validation. You bet. Charting techniques to help you visualize data. Bam! And you'll get full coverage of these great Flex 4 upgrades: Next generation Spark components-New buttons, form inputs, navigation controls and other visual components replace the Flex 3 \"Malo\" versions. Spark components are easier to customize, which makes skinning and theme design much faster. A new \"network monitor\" allows you to see the data communications between a Flex application and a backend server, which helps when trying to debug applications that are communicating to another system/service. Numerous productivity boosting features that speed up the process of creating applications. A faster compiler to take your human-written source code and convert it into a machine-readable format. Built-in support for unit testing allows you to improve the quality of your software, and reduce the time spent in testing",
10    "status": "PUBLISH",
11    "authors": [
12      "Tarik Ahmed",
13      "Dan Orlando",
14      "John C. Bland III",
15      "Joel Hooks"
16    ],
17    "categories": [
18      "Internet"
19    ]
20  },
21  {
22    "id": 6
23  }
24 ]
```



15-Lista de livros que têm comentários. Ordenado pelo número total de comentários.

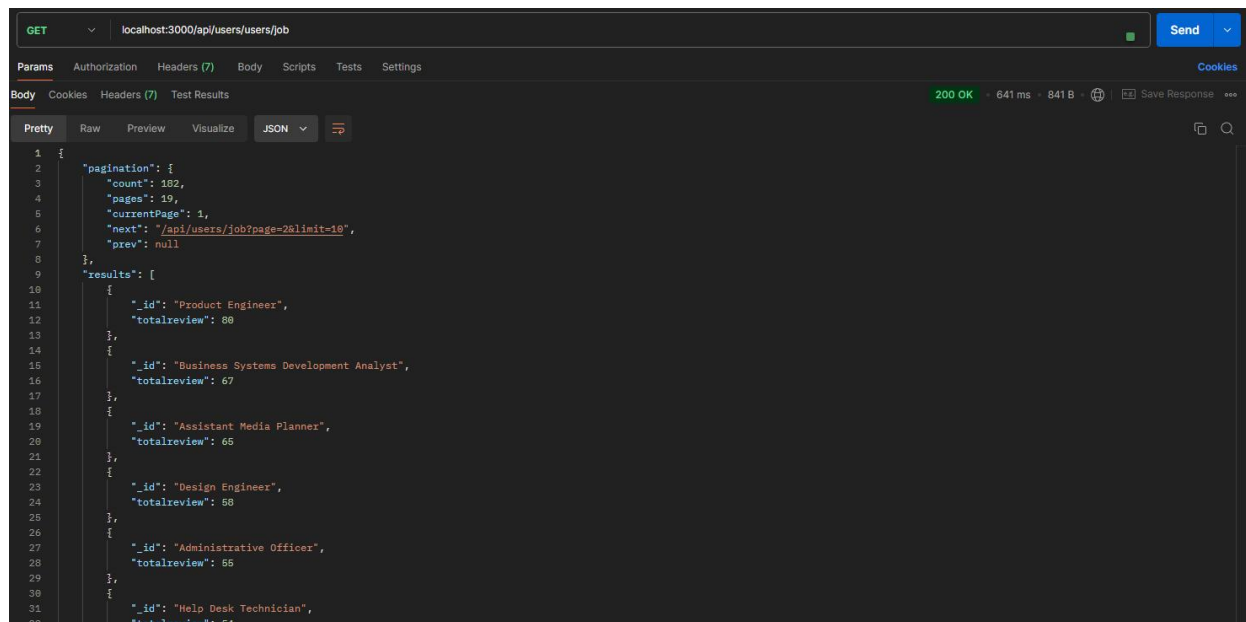
GET localhost:3000/api/books/comments



```
1 {
2   "pagination": {
3     "count": 35,
4     "pages": 2,
5     "currentPage": 1,
6     "next": "/api/books/comments?page=2&limit=20",
7     "prev": null
8   },
9   "books": [
10    {
11      "_id": 23,
12      "title": "Hibernate in Action (Chinese Edition)",
13      "commentCount": 42
14    },
15    {
16      "_id": 49,
17      "title": "Visual Object Oriented Programming",
18      "commentCount": 37
19    },
20    {
21      "_id": 4,
22      "title": "Flex 3 in Action",
23      "commentCount": 35
24    },
25    {
26      "_id": 39,
27      "title": "jQuery in Action, Second Edition",
28      "commentCount": 31
29    },
30    {
31      "_id": 10,
32      "title": "Distributed Application Development with PowerBuilder 6.0",
33      "commentCount": 31
34    }
35  ]
36 }
```

16-Número total de reviews por “job”

GET localhost:3000/api/users/users/job

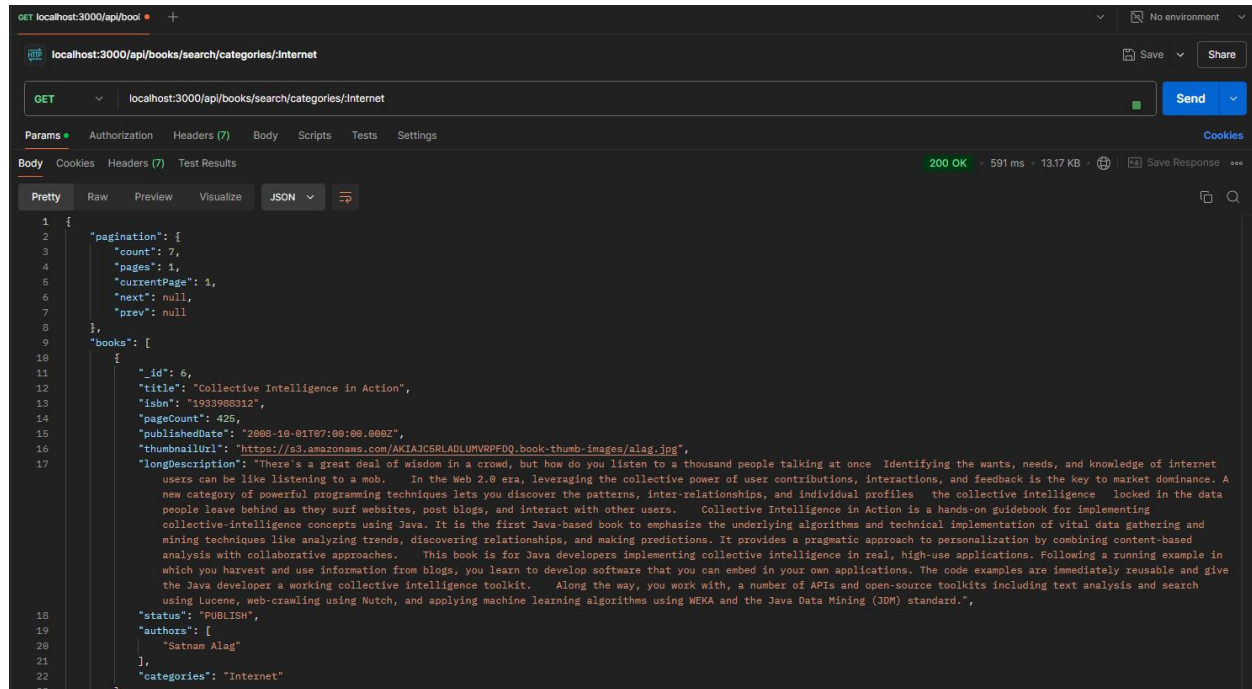


```
1 {
2   "pagination": {
3     "count": 102,
4     "pages": 19,
5     "currentPage": 1,
6     "next": "/api/users/job?page=2&limit=10",
7     "prev": null
8   },
9   "results": [
10    {
11      "_id": "Product Engineer",
12      "totalreview": 80
13    },
14    {
15      "_id": "Business Systems Development Analyst",
16      "totalreview": 67
17    },
18    {
19      "_id": "Assistant Media Planner",
20      "totalreview": 65
21    },
22    {
23      "_id": "Design Engineer",
24      "totalreview": 60
25    },
26    {
27      "_id": "Administrative Officer",
28      "totalreview": 55
29    },
30    {
31      "_id": "Help Desk Technician",
32      "totalreview": 54
33    }
34  ]
35 }
```

Resultado deverá apresentar apenas o “job” e número de reviews

17-Lista de livros filtrada por preço, categoria e/ou autor.

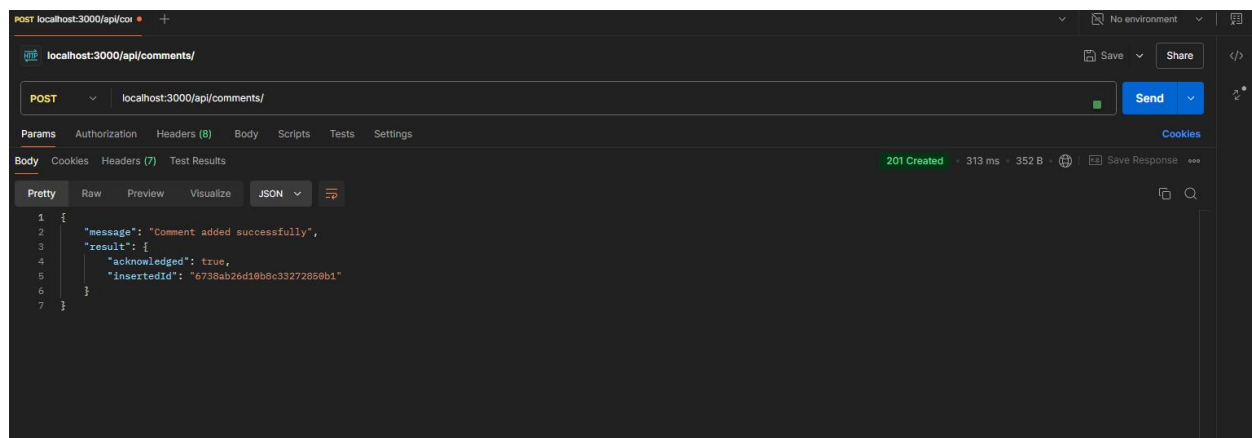
GET localhost:3000/api/books/search/categories/:category



```
1 {
2   "pagination": {
3     "count": 7,
4     "pages": 1,
5     "currentPage": 1,
6     "next": null,
7     "prev": null
8   },
9   "books": [
10    {
11      "_id": 6,
12      "title": "Collective Intelligence in Action",
13      "isbn": "1933988312",
14      "pageCount": 428,
15      "publishedDate": "2008-10-01T07:00:00.000Z",
16      "thumbnailUrl": "https://s3.amazonaws.com/AKIAJCSRLADLUMVRPF0Q_book-thumb-images/alag.jpg",
17      "longDescription": "There's a great deal of wisdom in a crowd, but how do you listen to a thousand people talking at once? Identifying the wants, needs, and knowledge of internet users can be like listening to a mob. In the Web 2.0 era, leveraging the collective power of user contributions, interactions, and feedback is the key to market dominance. A new category of powerful programming techniques lets you discover the patterns, inter-relationships, and individual profiles the collective intelligence locked in the data people leave behind as they surf websites, post blogs, and interact with other users. Collective Intelligence in Action is a hands-on guidebook for implementing collective-intelligence concepts using Java. It is the first Java-based book to emphasize the underlying algorithms and technical implementation of vital data gathering and mining techniques like analyzing trends, discovering relationships, and making predictions. It provides a pragmatic approach to personalization by combining content-based analysis with collaborative approaches. This book is for Java developers implementing collective intelligence in real, high-use applications. Following a running example in which you harvest and use information from blogs, you learn to develop software that you can embed in your own applications. The code examples are immediately reusable and give the Java developer a working collective intelligence toolkit. Along the way, you work with, a number of APIs and open-source toolkits including text analysis and search using Lucene, web-crawling using Nutch, and applying machine learning algorithms using WEKA and the Java Data Mining (JDM) standard.",
18      "status": "PUBLISH",
19      "authors": [
20        "Satnam Alag"
21      ],
22      "categories": "Internet"
23    }
24  ]
25 }
```

18-Adicionar novo comentário a um livro

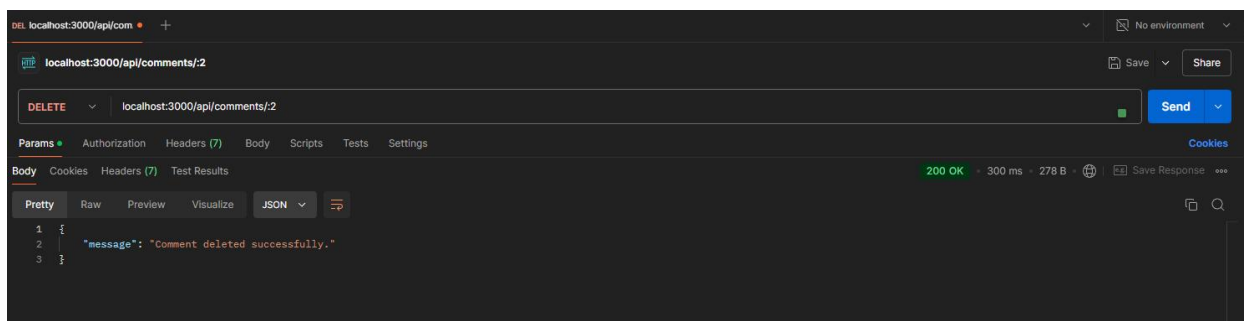
POST localhost:3000/api/comments



```
1 {
2   "message": "Comment added successfully",
3   "result": {
4     "acknowledged": true,
5     "insertedId": "6738ab26d10b0c33272850b1"
6   }
7 }
```

## 19-Remove comment by `_id`

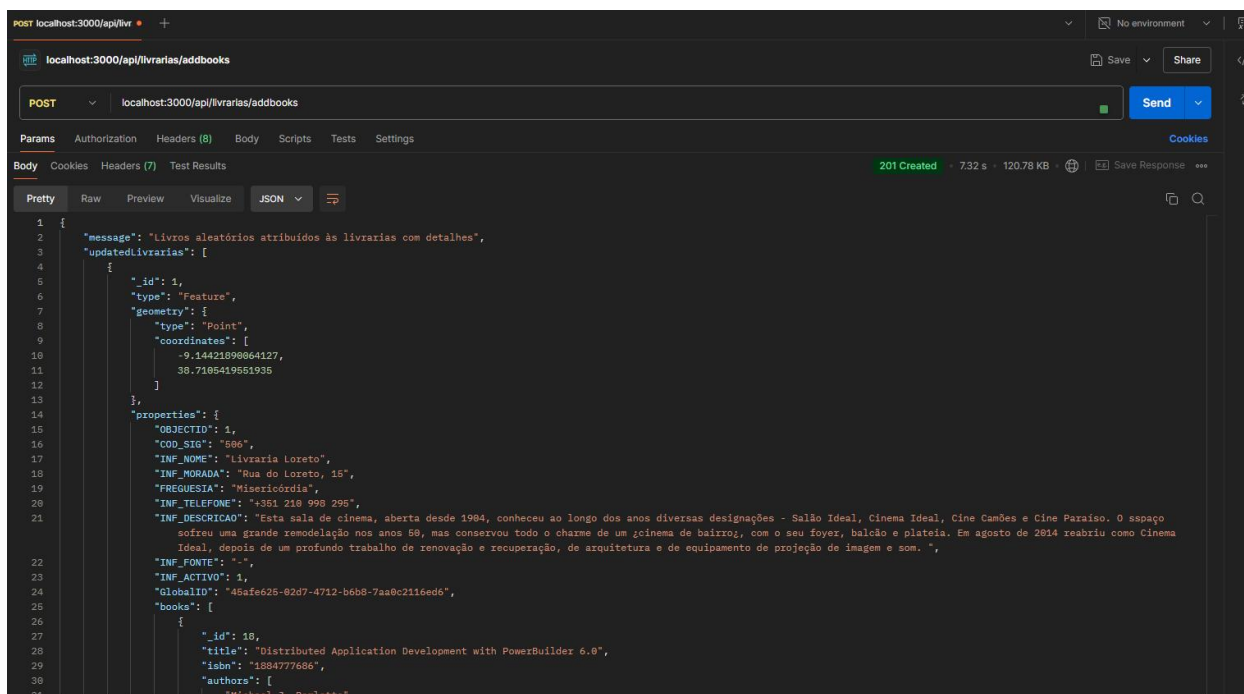
Delete localhost:3000/api/comments



## 20-

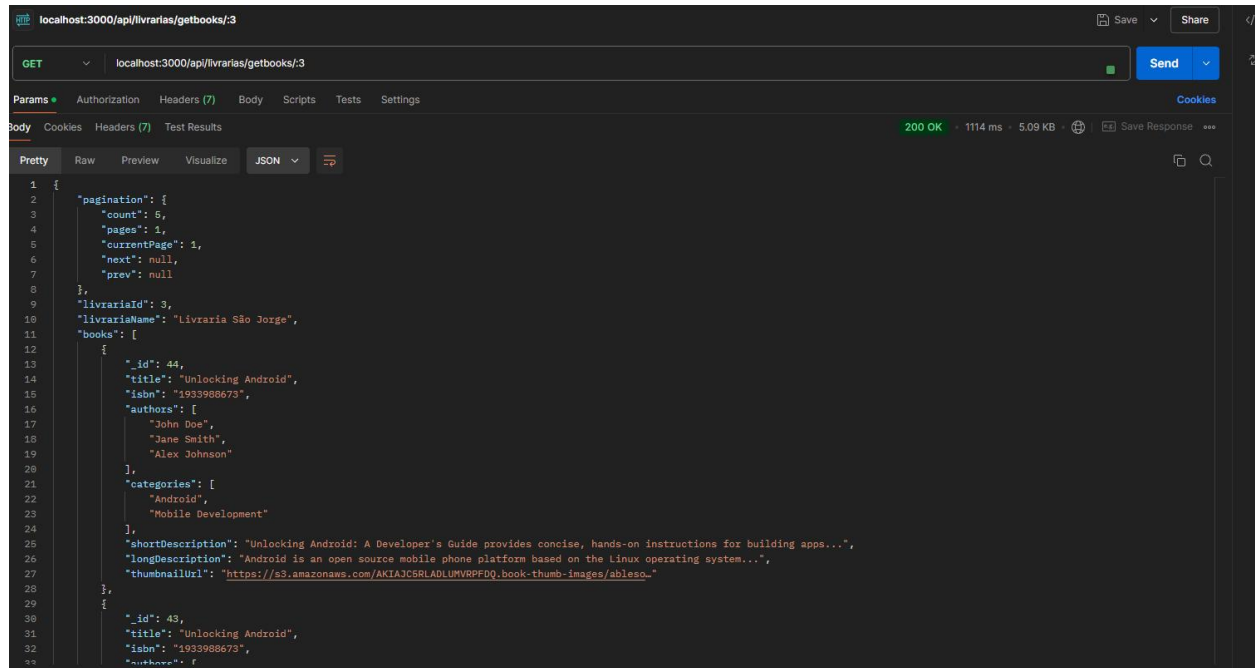
20.1-Adicionar livros da lista (books.json) a cada livraria.

POST localhost:3000/api/livrarias/addbooks



## 20.2-Consultar livros numa livraria

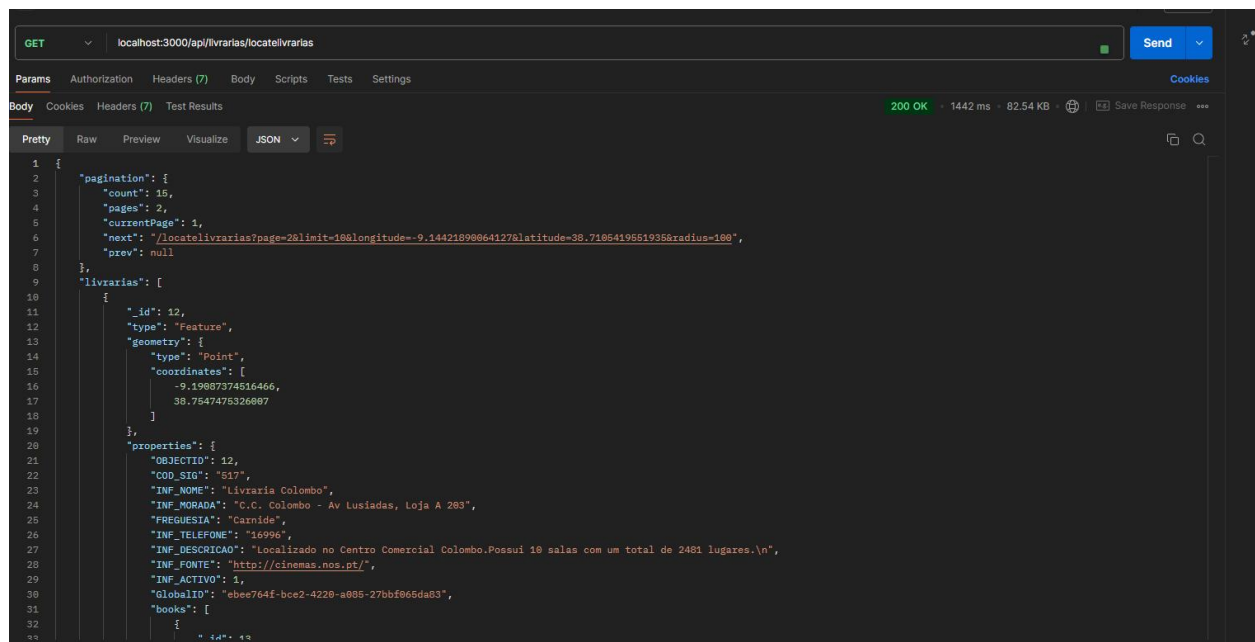
GET localhost:3000/api/livrarias/getbook/:id



```
1 {
2   "pagination": {
3     "count": 6,
4     "pages": 1,
5     "currentPage": 1,
6     "next": null,
7     "prev": null
8   },
9   "livrariaId": 3,
10  "livrariaName": "Livraria São Jorge",
11  "books": [
12    {
13      "_id": 44,
14      "title": "Unlocking Android",
15      "isbn": "1933988673",
16      "authors": [
17        "John Doe",
18        "Jane Smith",
19        "Alex Johnson"
20      ],
21      "categories": [
22        "Android",
23        "Mobile Development"
24      ],
25      "shortDescription": "Unlocking Android: A Developer's Guide provides concise, hands-on instructions for building apps...",
26      "longDescription": "Android is an open source mobile phone platform based on the Linux operating system...",
27      "thumbnailUrl": "https://s3.amazonaws.com/AKIAJCSRLADLUNVRPFDDQ.book-thumb-images/ableso..."
28    },
29    {
30      "_id": 43,
31      "title": "Unlocking Android",
32      "isbn": "1933988673",
33      "authors": [
```

## 20.3-Lista de livrarias perto de uma localização

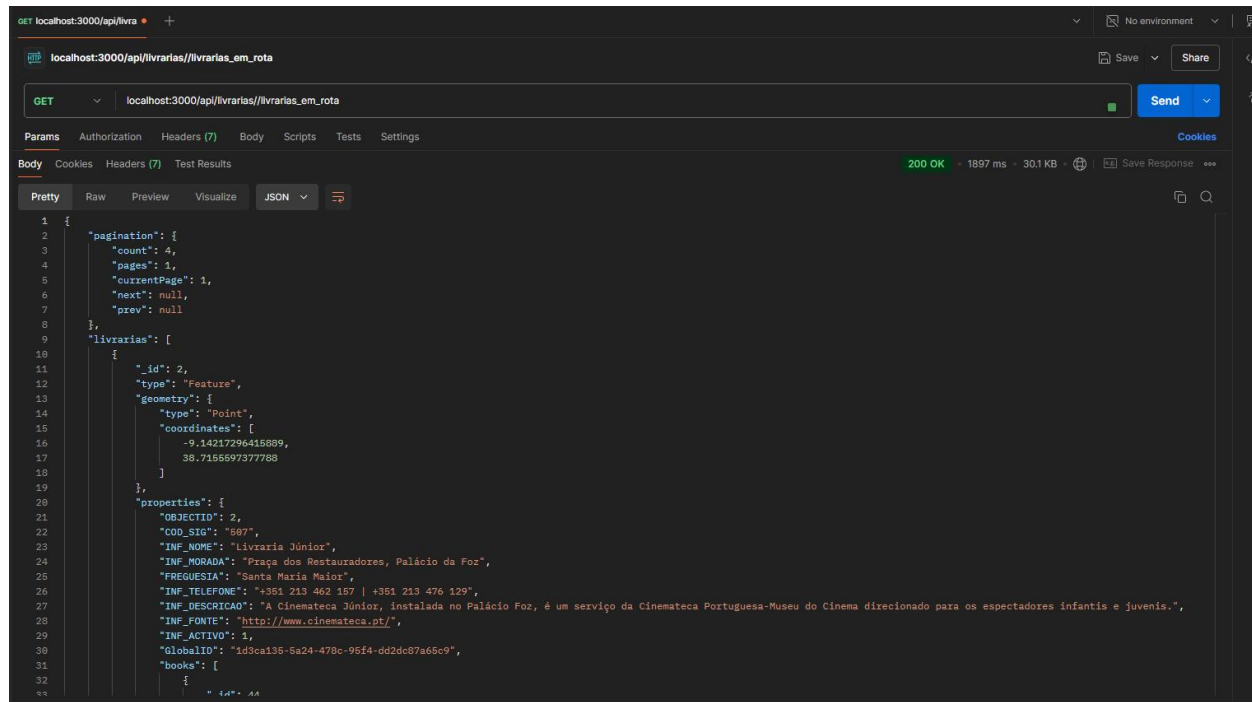
GET localhost:3000/api/livrarias/locatelivrarias



```
1 {
2   "pagination": {
3     "count": 15,
4     "pages": 2,
5     "currentPage": 1,
6     "next": "/locatelivrarias?page=2&limit=10&longitude=-9.14421899864127&latitude=38.71054195519358&radius=100",
7     "prev": null
8   },
9   "livrarias": [
10    {
11      "_id": 12,
12      "type": "Feature",
13      "geometry": {
14        "type": "Point",
15        "coordinates": [
16          -9.19087374516466,
17          38.7547475326887
18        ]
19      },
20      "properties": {
21        "OBJECTID": 12,
22        "COD_SIG": "517",
23        "INF_NOME": "Livraria Colombo",
24        "INF_MORADA": "C.C. Colombo - Av Lusíadas, Loja A 203",
25        "FREGUESIA": "Carnide",
26        "INF_TELEFONE": "16996",
27        "INF_DESCRIPTION": "Localizado no Centro Comercial Colombo.Possui 10 salas com um total de 2481 lugares.\n",
28        "INF_FONTE": "http://cinemas.nos.pt/",
29        "INF_ACTIV": 1,
30        "GlobalID": "ebae764f-bce2-4220-a085-27bbf065da83",
31        "books": [
32          {
33            "_id": 44,
```

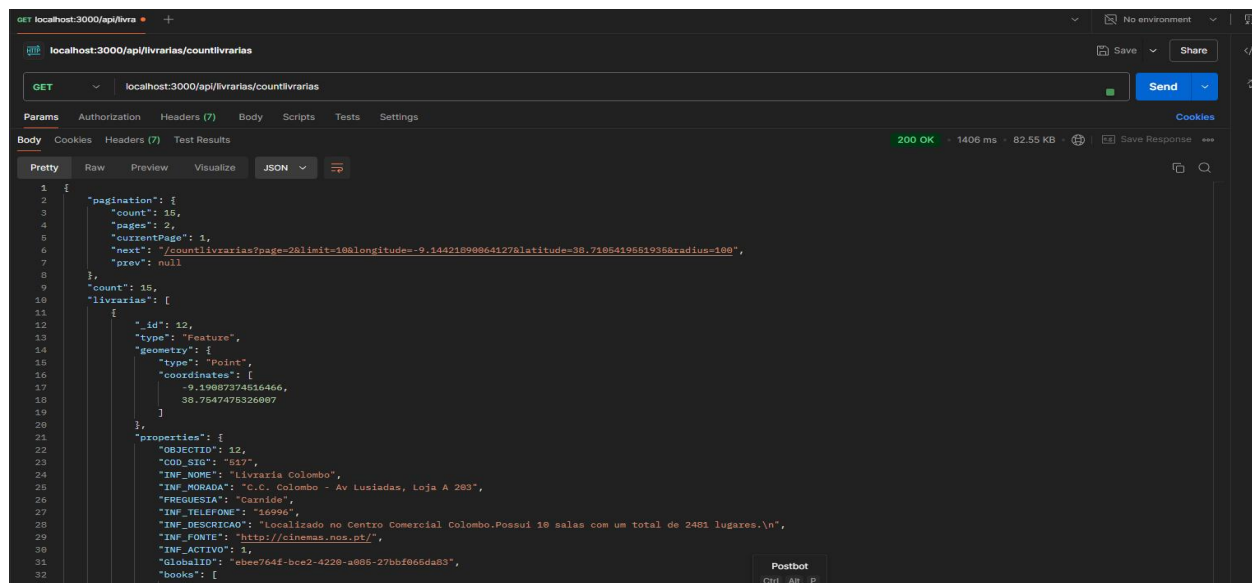
## 20.4-Lista de livrarias perto do caminho de uma rota

GET localhost:3000/api/livrarias/livrarias\_em\_rota



## 20.5-Retornar número de livrarias perto de uma localização

GET localhost:3000/api/livrarias/countlivrarias



20.6-Verificar se um determinado *user* (Ponto) se encontra dentro da feira do livro

GET localhost:3000/api/livrarias/check-point

