Name: Patel Shivam S.
Enroll no: 21162101019
Sem: 5 Batch: 51 Branch: CBA

Sub: Microservices

Practical 10

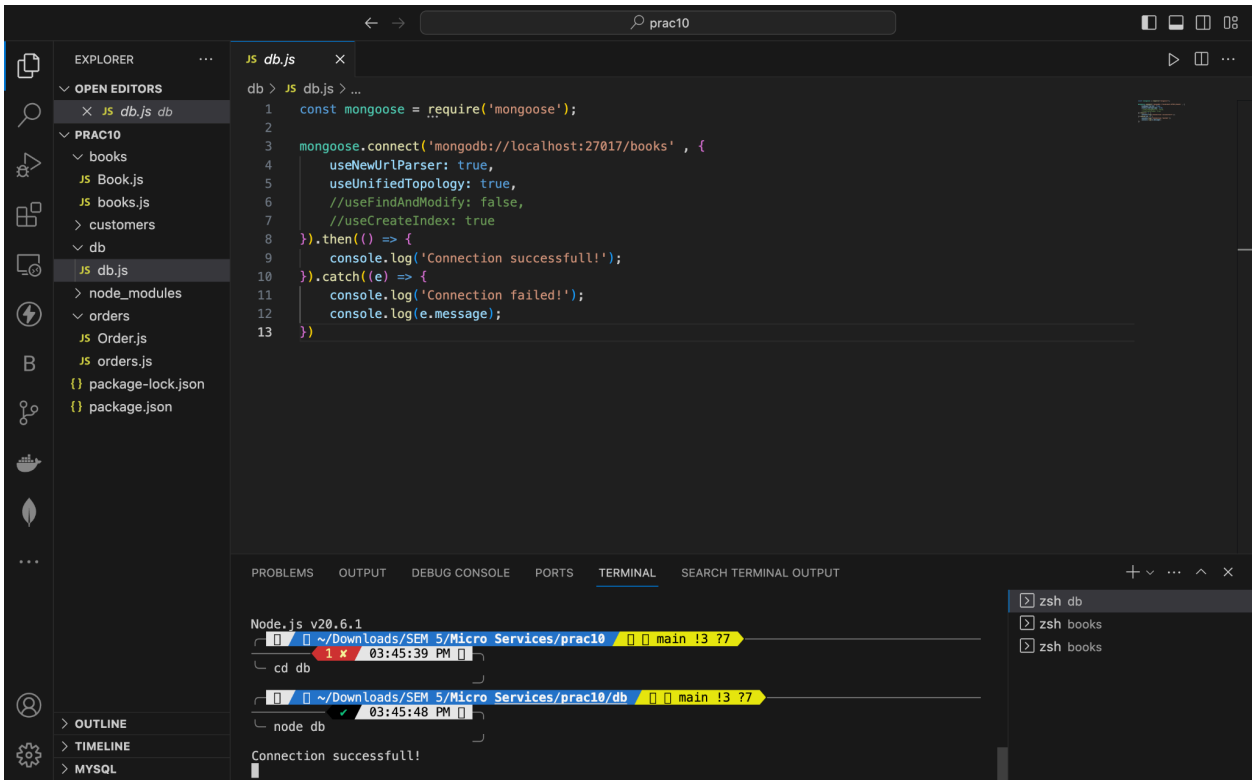
AIM: **Build a basic demo application for illustrating Microservices with Node.js.**

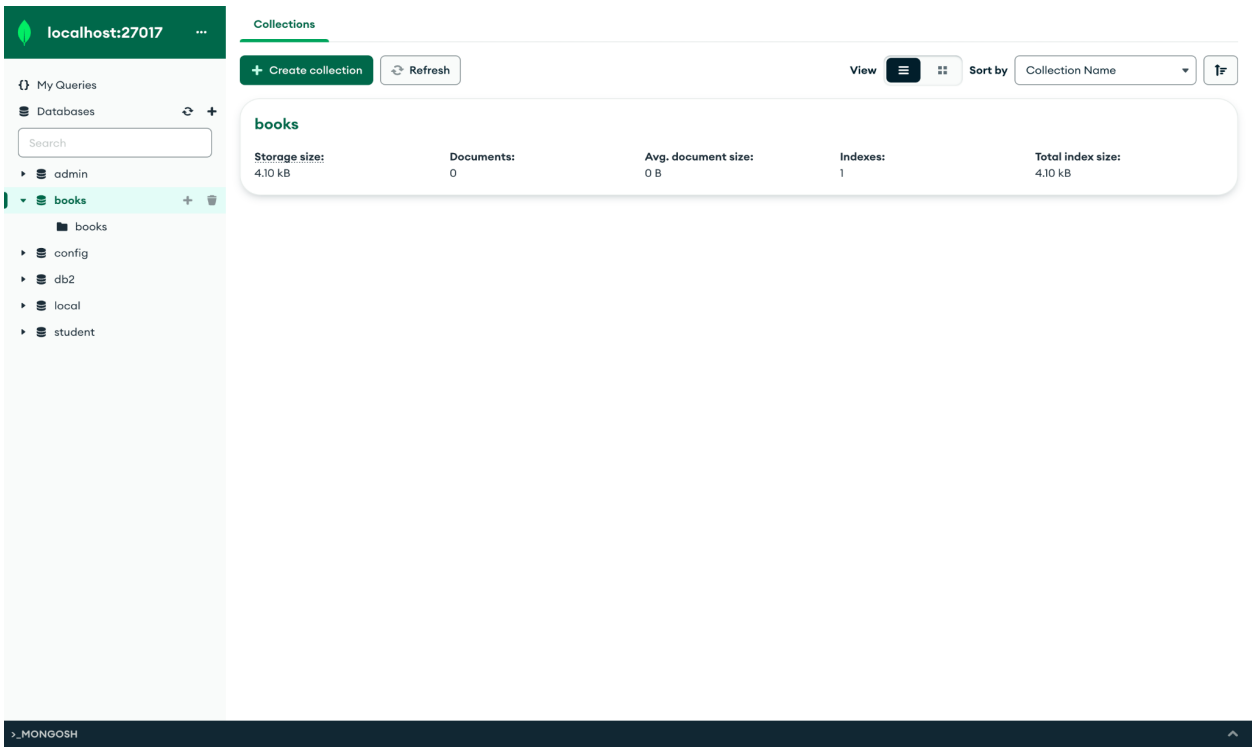
Implement an application on Microservices using Node js where each of the services will have individual servers running on different ports. These services will communicate with each other through REST APIs. Example application three services: Book, Customer, and Order services. The following tasks should be performed:

1. **Creating Database Connection.**
2. **Creating Book Service.**
3. **Creating Customer Service.**
4. **Creating Order Service.**

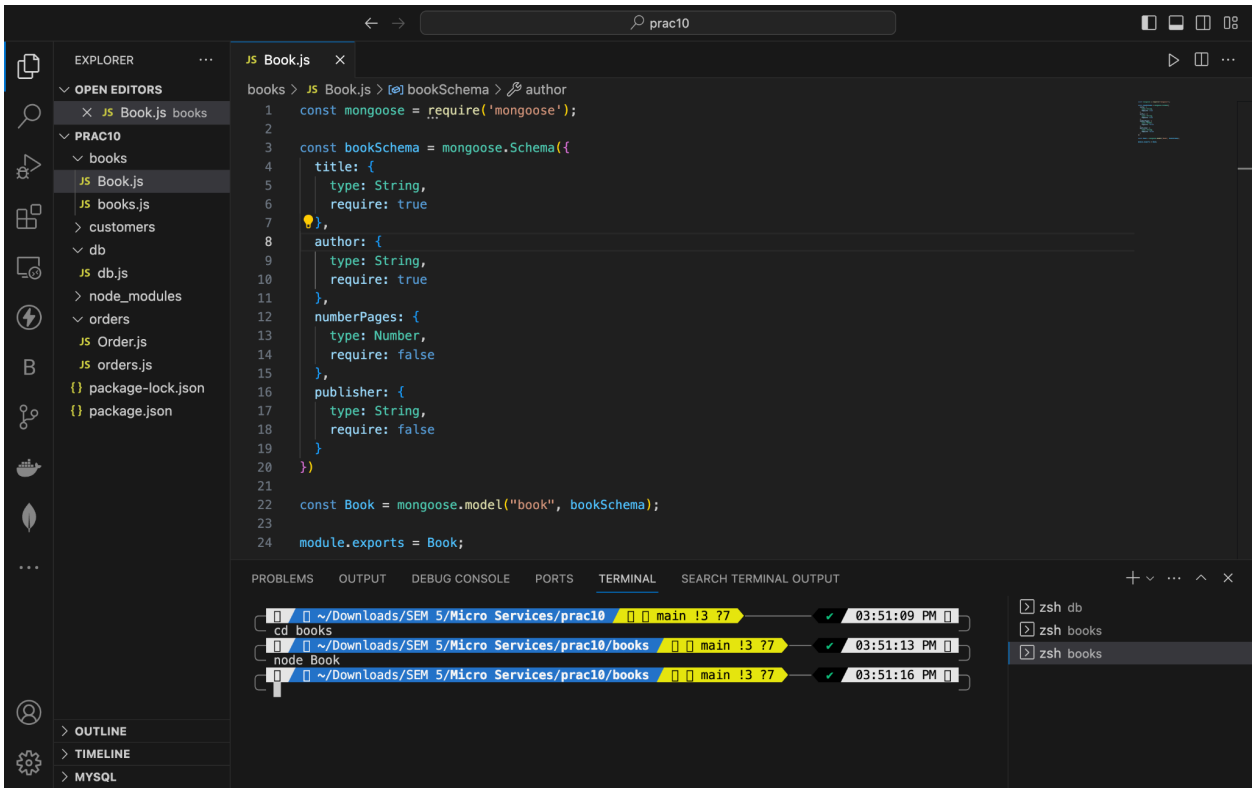
GITHUB LINK:
https://github.com/Shivam3783/microservice_practicals/tree/main/prac10

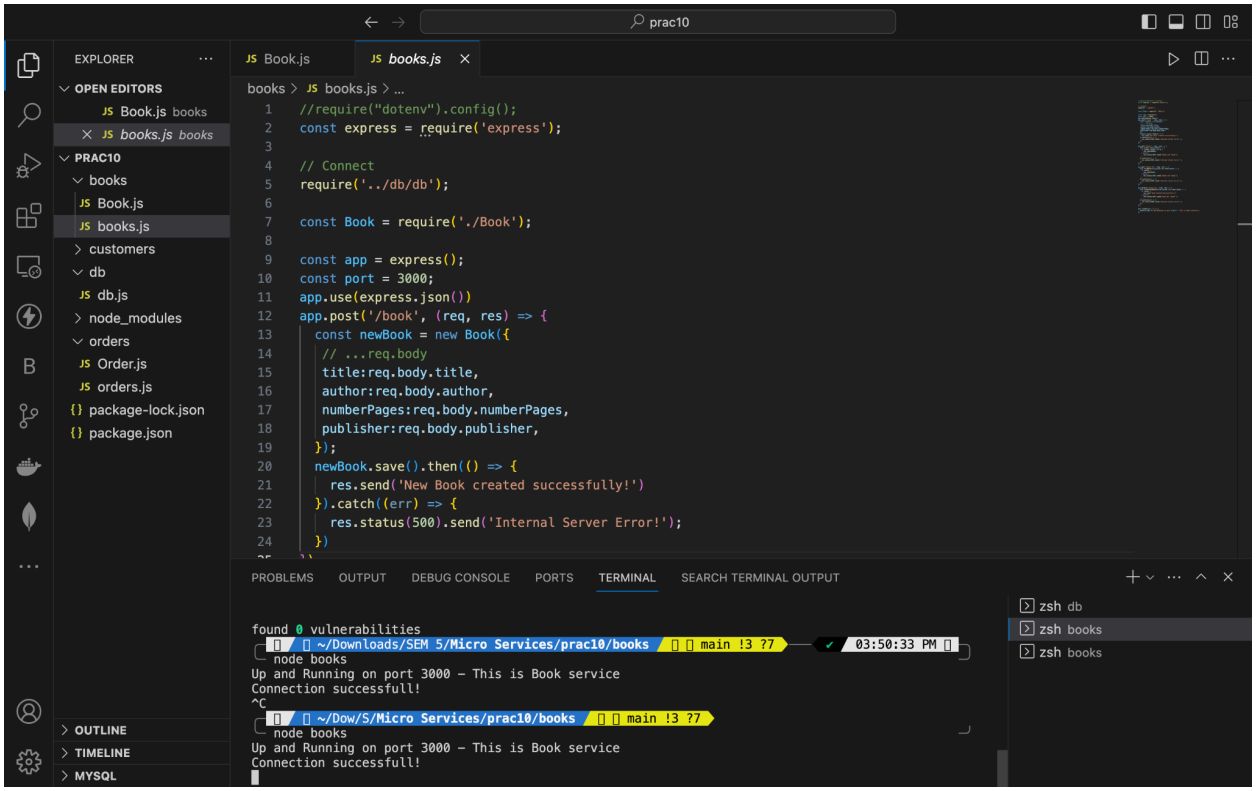
Practical 8.1: Creating Database Connection.



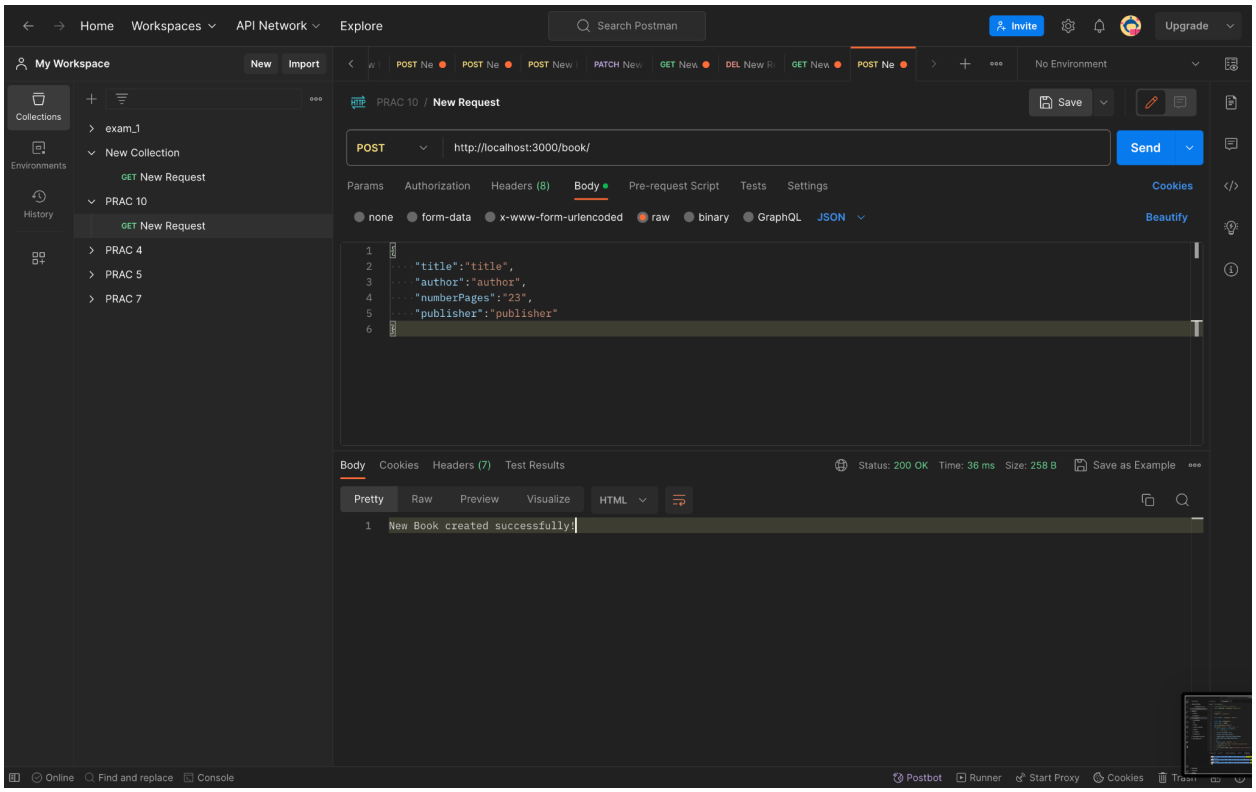


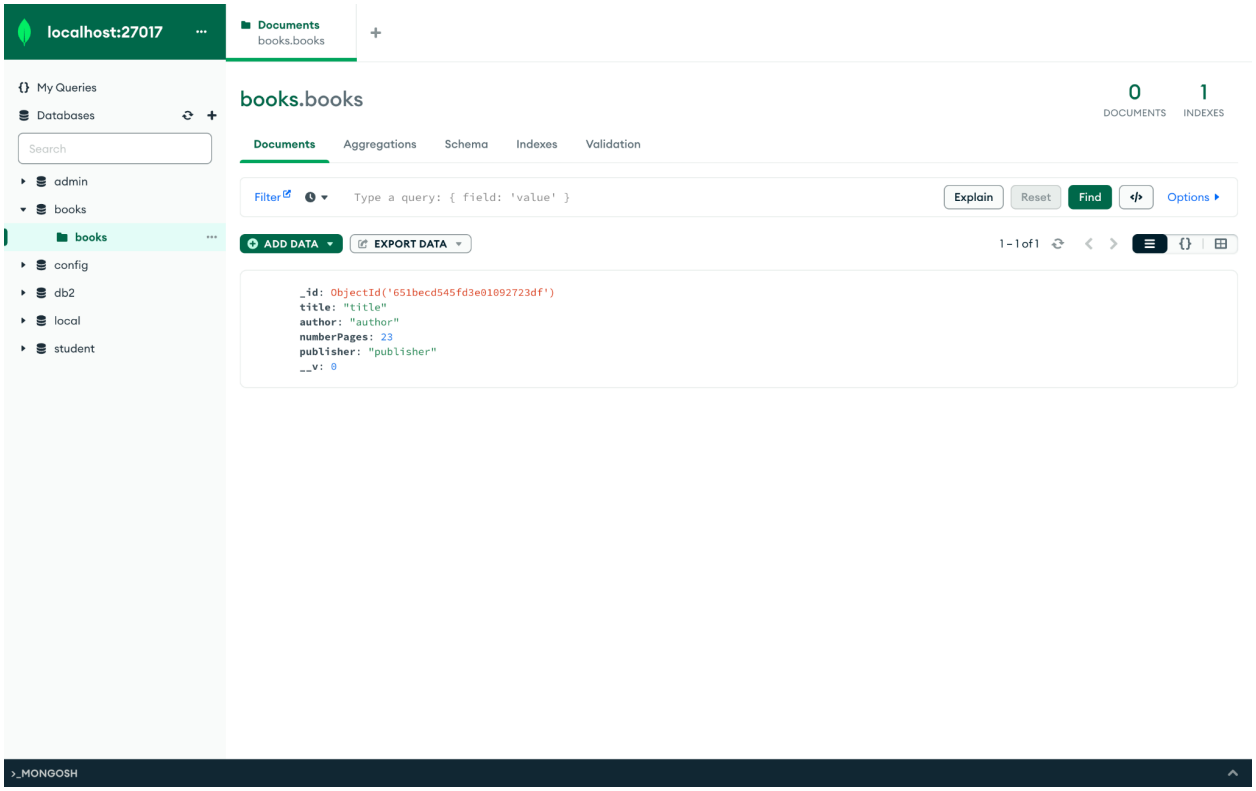
Practical 8.2: Creating Book Service.



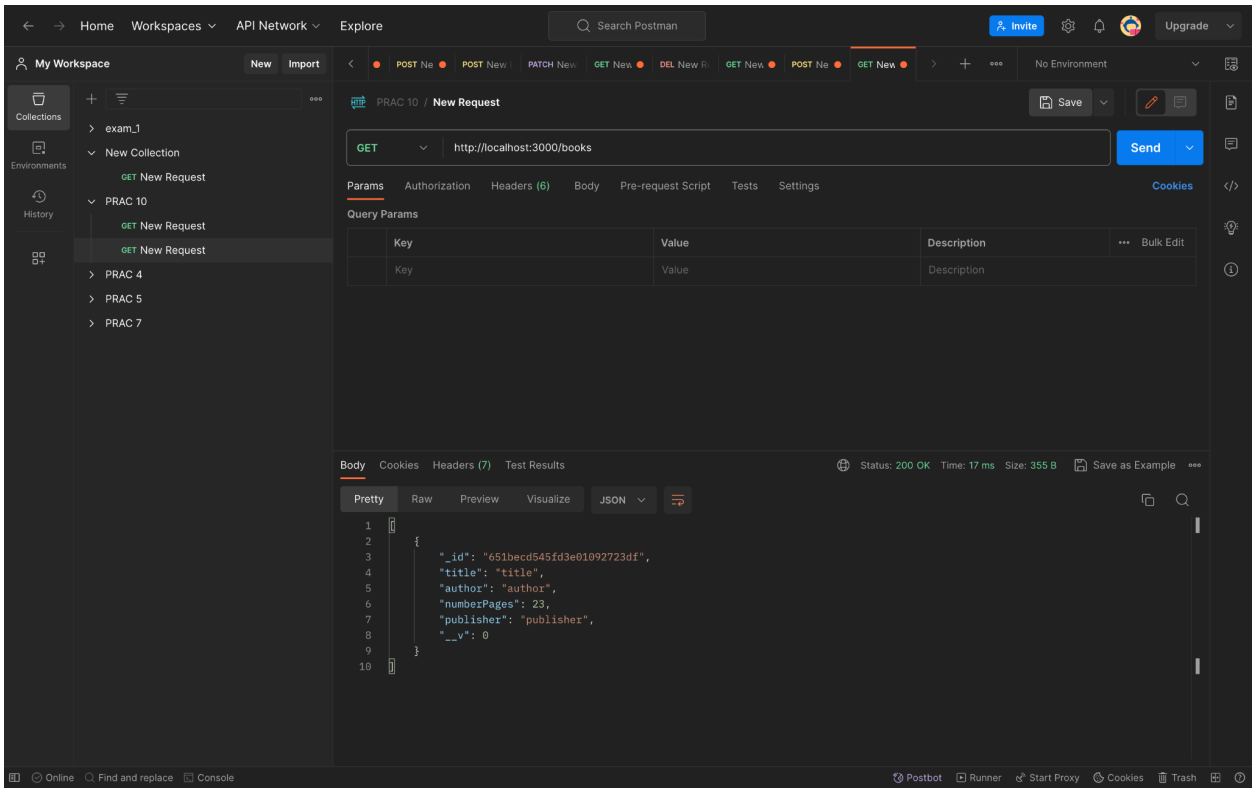


→ Post data

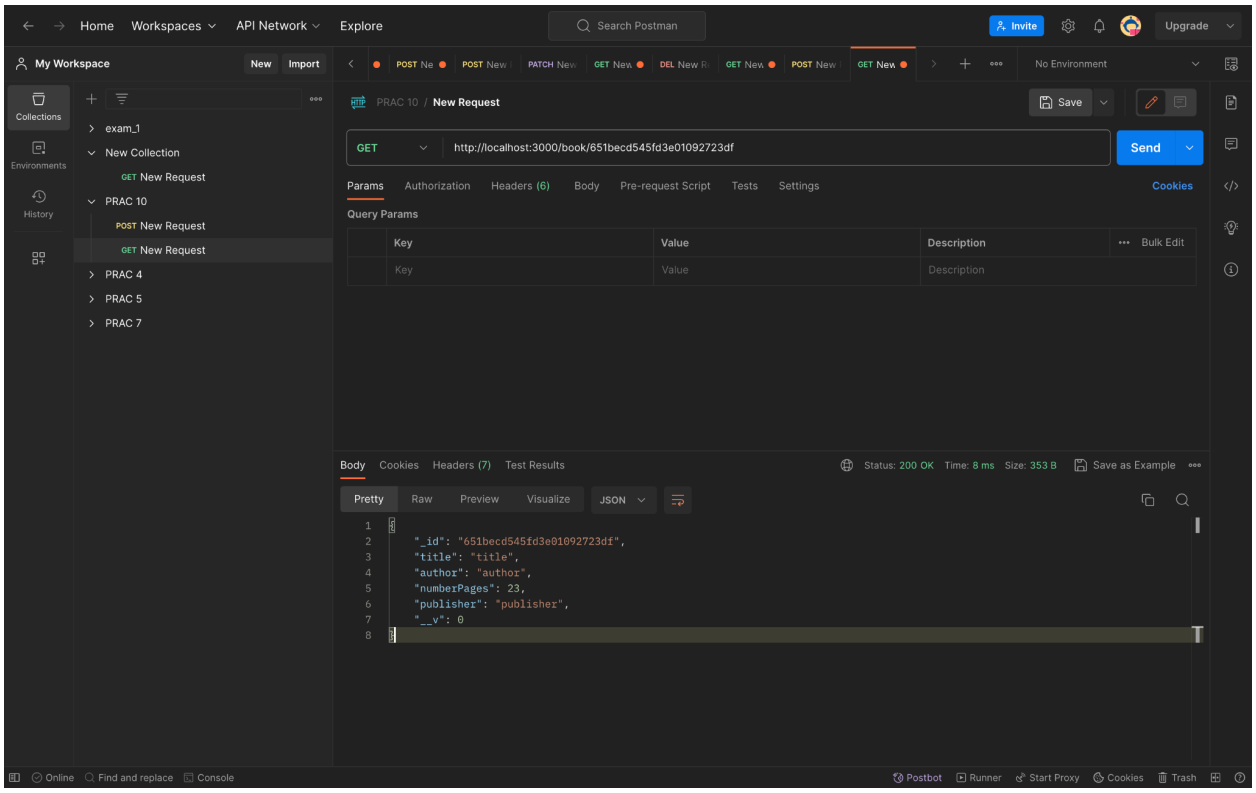

Home
Workspaces
API Network
Explore
Search Postman
Invite
Upgrade
My Workspace
New
Import
Collections
Environments
History
exam_1
New Collection
GET New Request
PRAC 10
GET New Request
PRAC 4
PRAC 5
PRAC 7
No Environment
PRAC 10 / New Request
Save
POST
http://localhost:3000/book/
Send
Params
Authorization
Headers (8)
Body
Pre-request Script
Tests
Settings
Cookies
none
form-data
x-www-form-urlencoded
raw
binary
GraphQL
JSON
Beautify
{
"title":"title",
"author":"author",
"numberPages":"23",
"publisher":"publisher"
}
Body
Cookies
Headers (7)
Test Results
Status: 200 OK
Time: 36 ms
Size: 258 B
Save as Example
Pretty
Raw
Preview
Visualize
HTML
New Book created successfully!
Online
Find and replace
Console
Postbot
Runner
Start Proxy
Cookies


localhost:27017
Documents
books.books
My Queries
Databases
Search
admin
books
books
config
db2
local
student
books.books
0
DOCUMENTS
1
INDEXES
Documents
Aggregations
Schema
Indexes
Validation
Filter
Type a query: { field: 'value' }
Explain
Reset
Find
Options
ADD DATA
EXPORT DATA
1 - 1 of 1
_id: ObjectId('651becd545fd3e01092723df')
title: "title"
author: "author"
numberPages: 23
publisher: "publisher"
__v: 0
>_MONGOSH

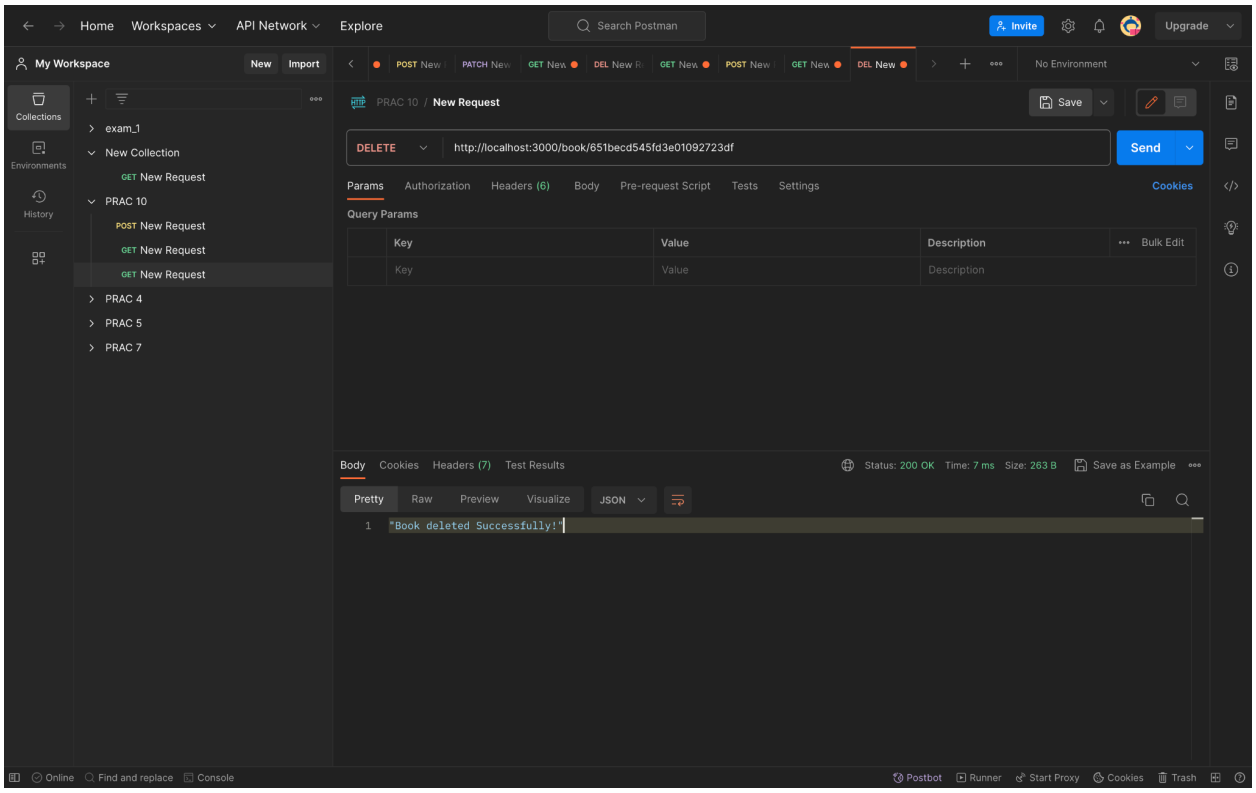
→ Get data

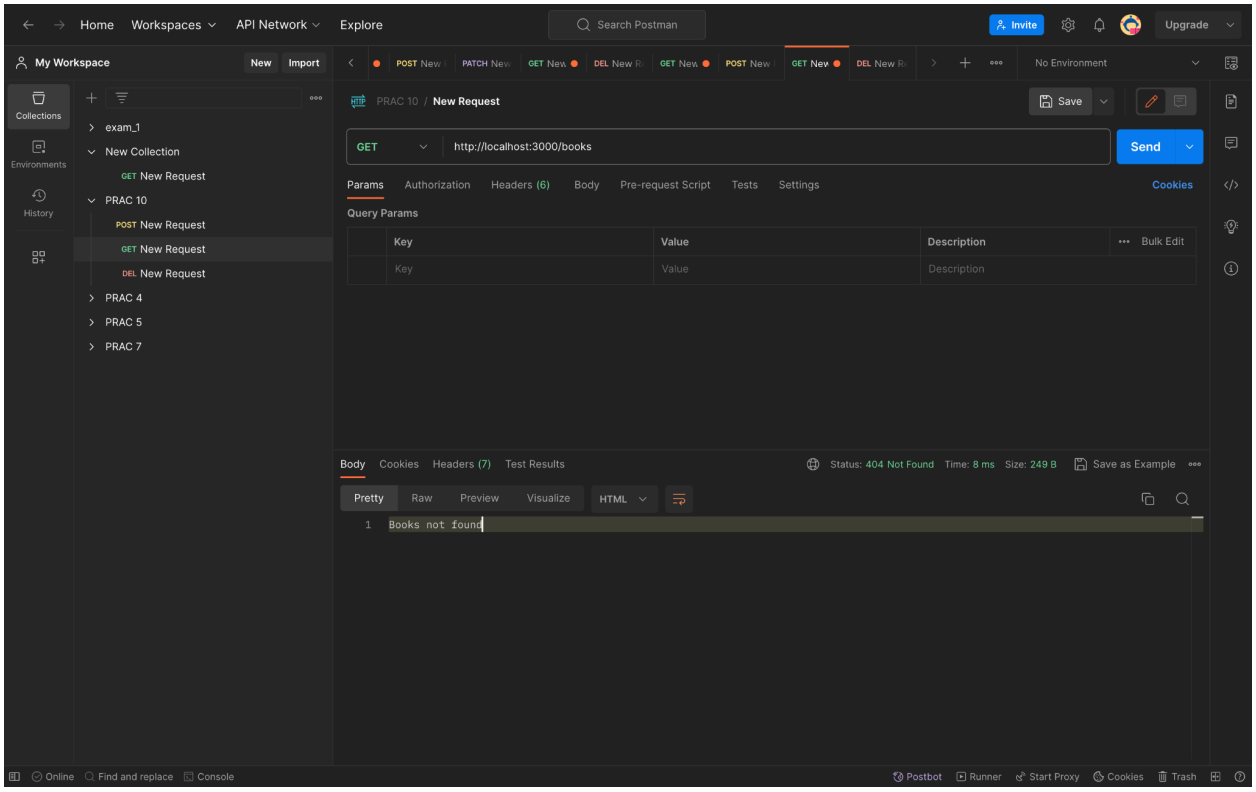


→ Get data by ID

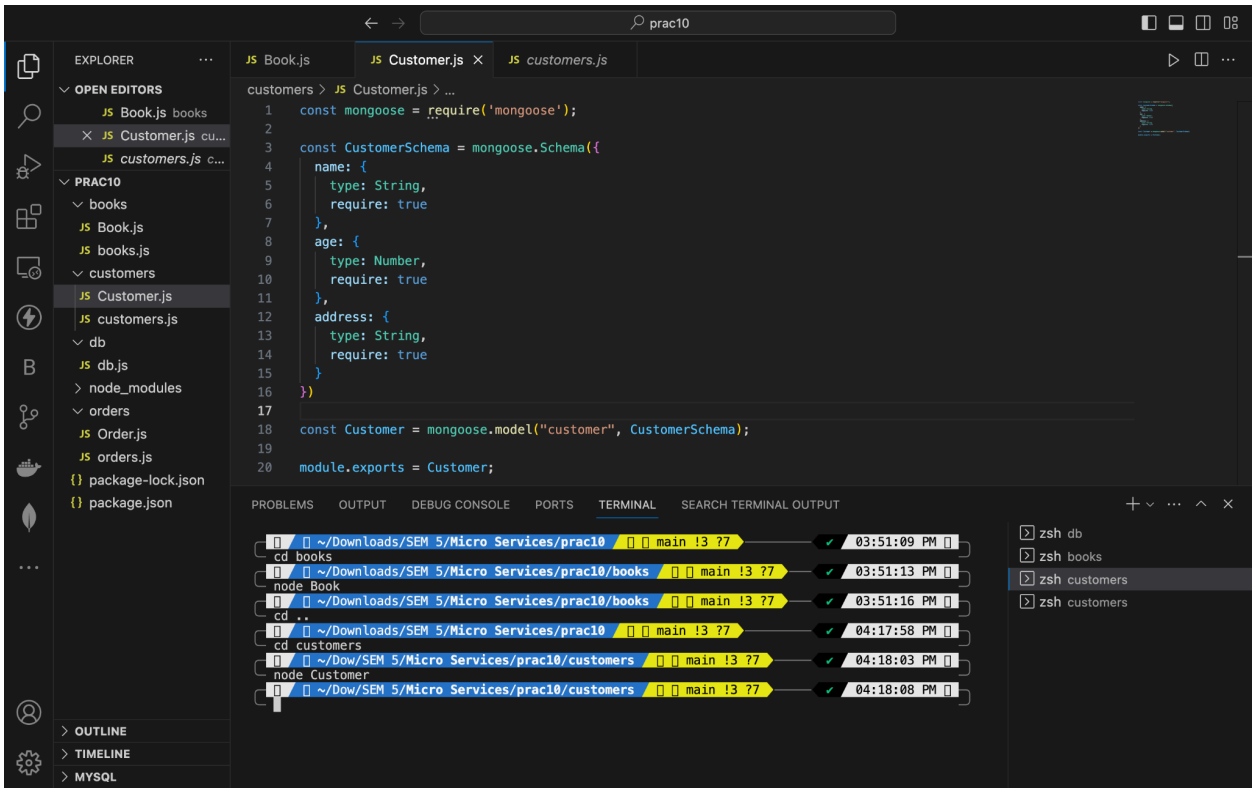


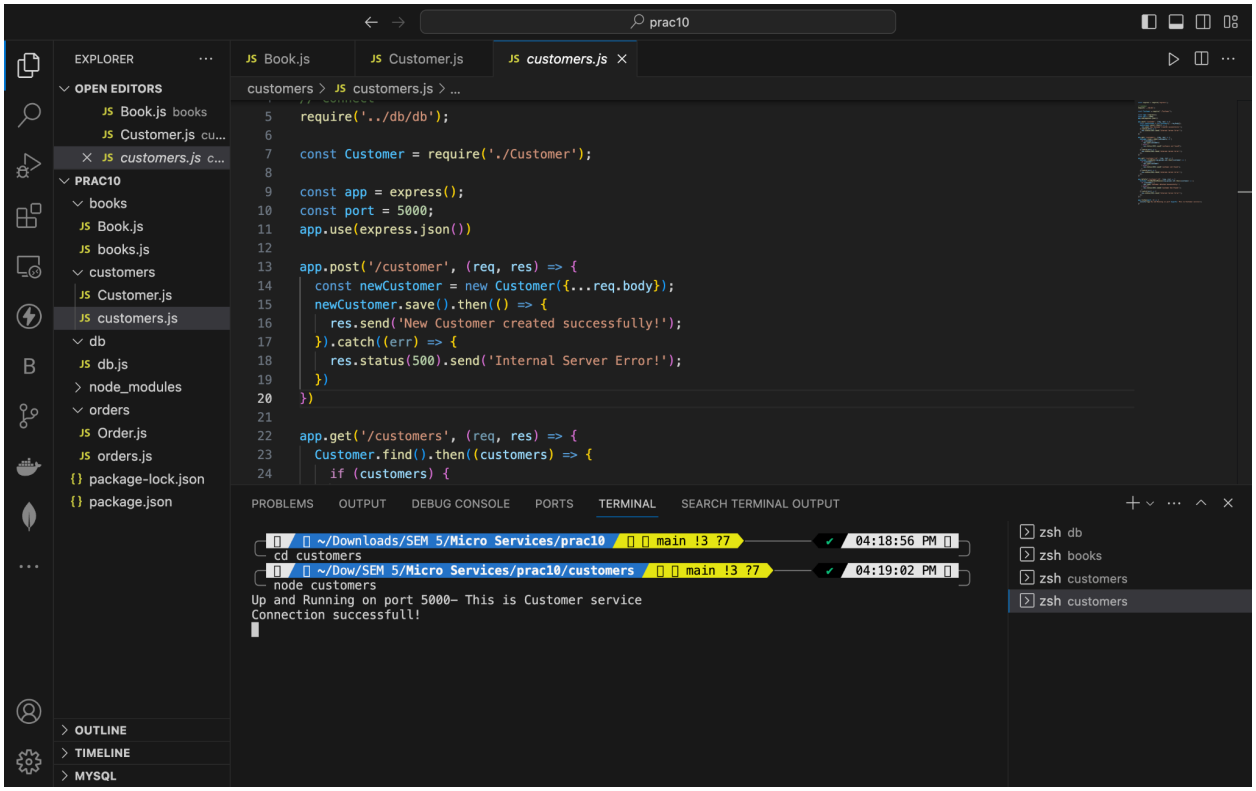
→ Delete data by ID

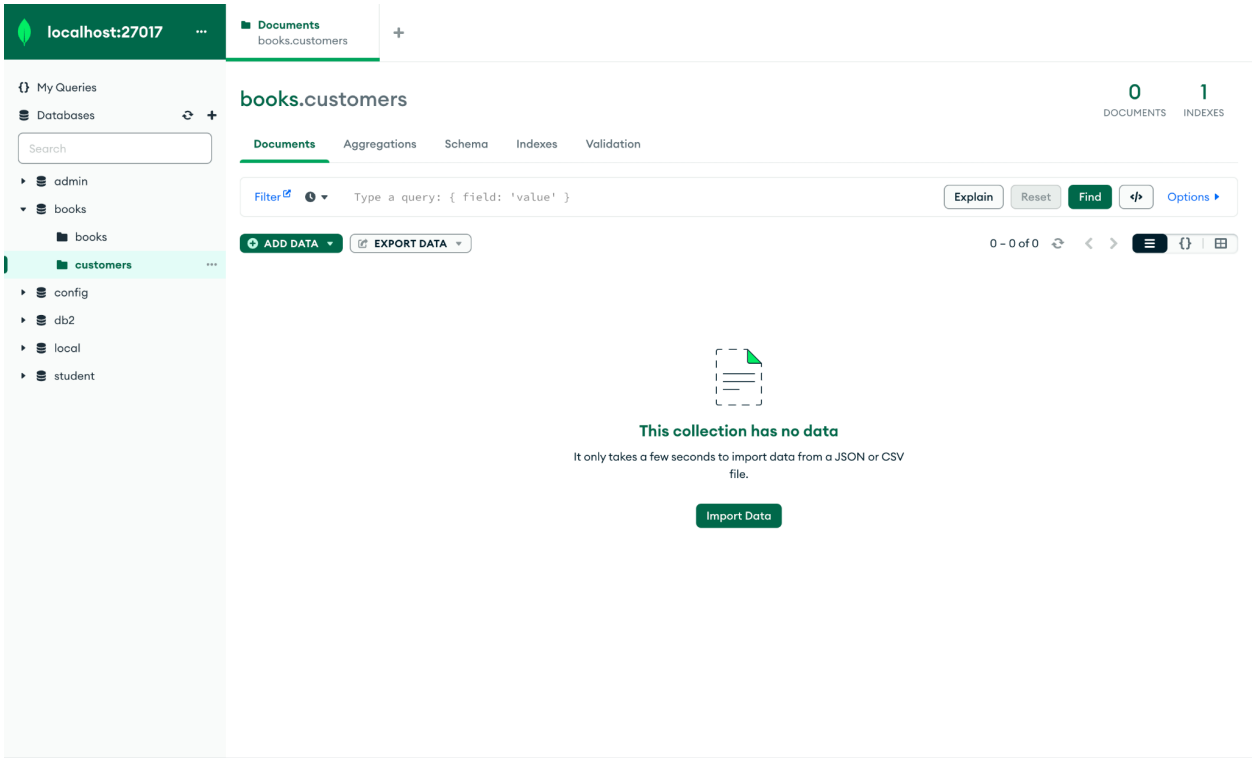




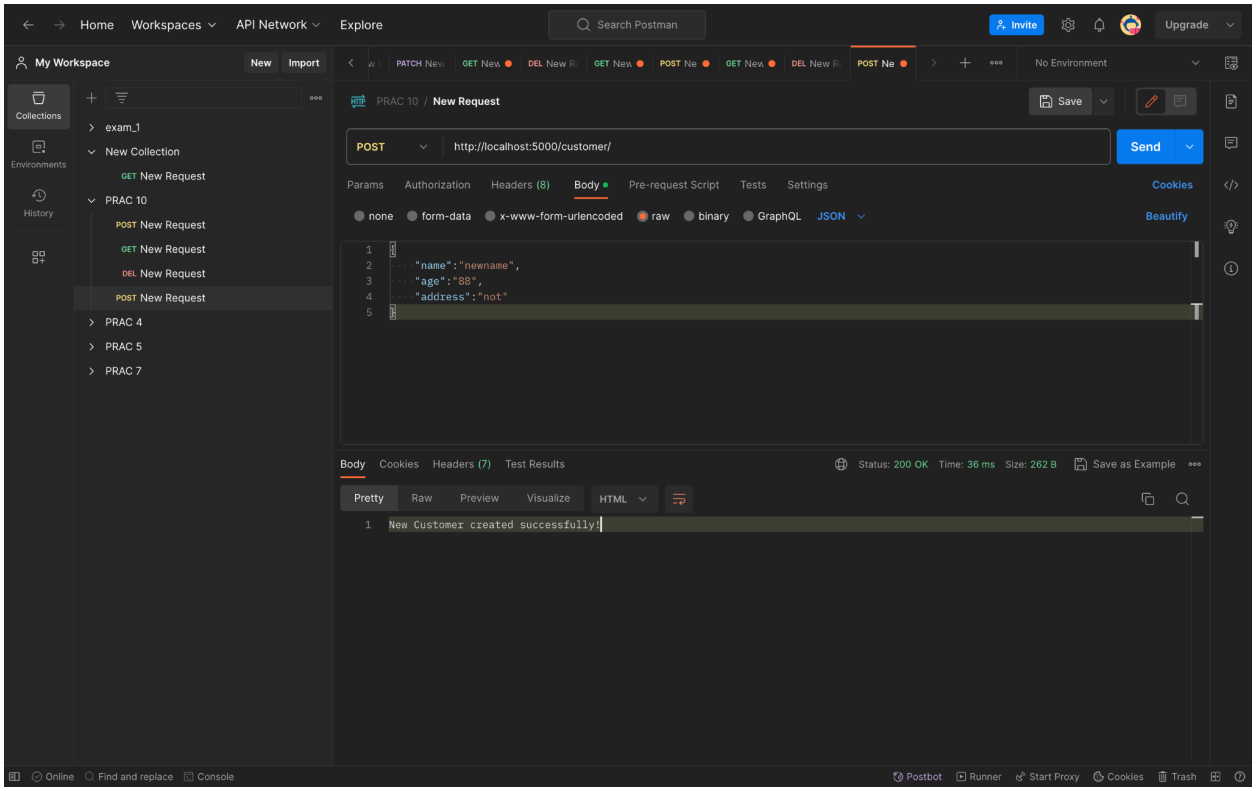
Practical 8.3: Creating Customer Service.

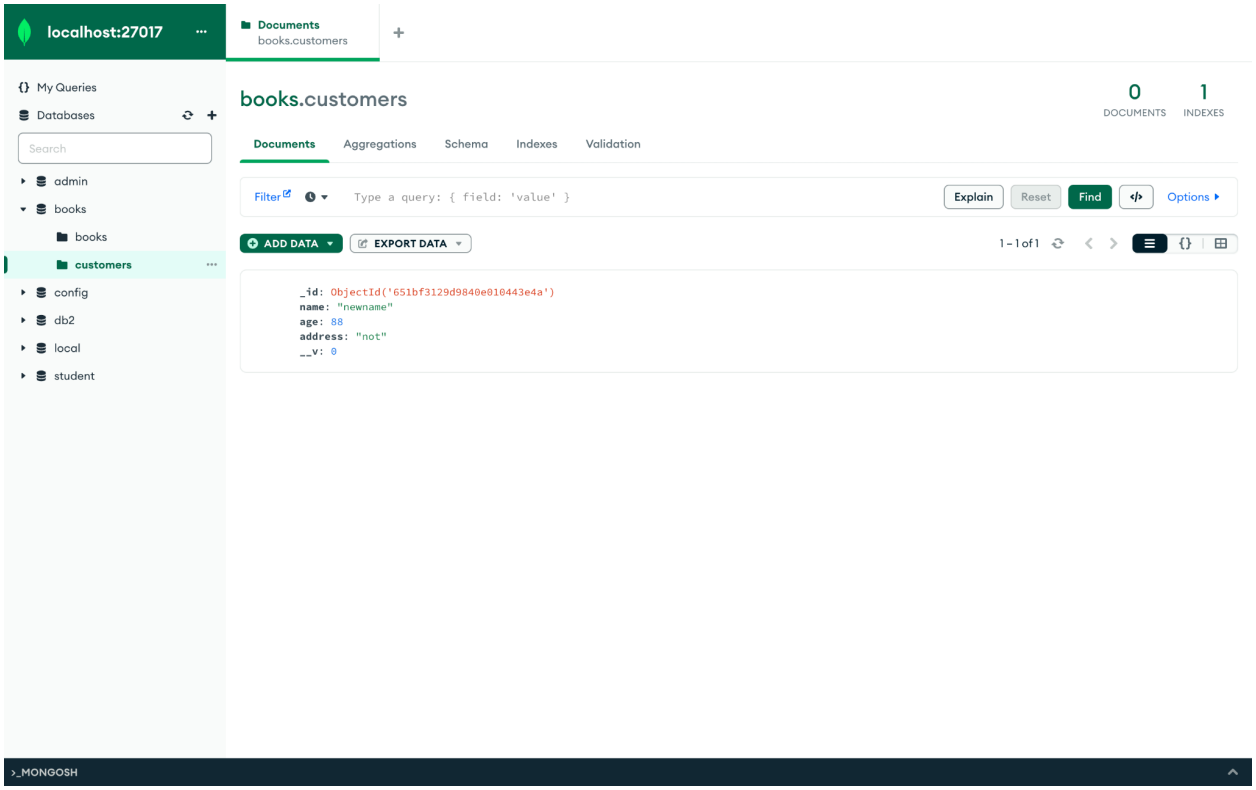




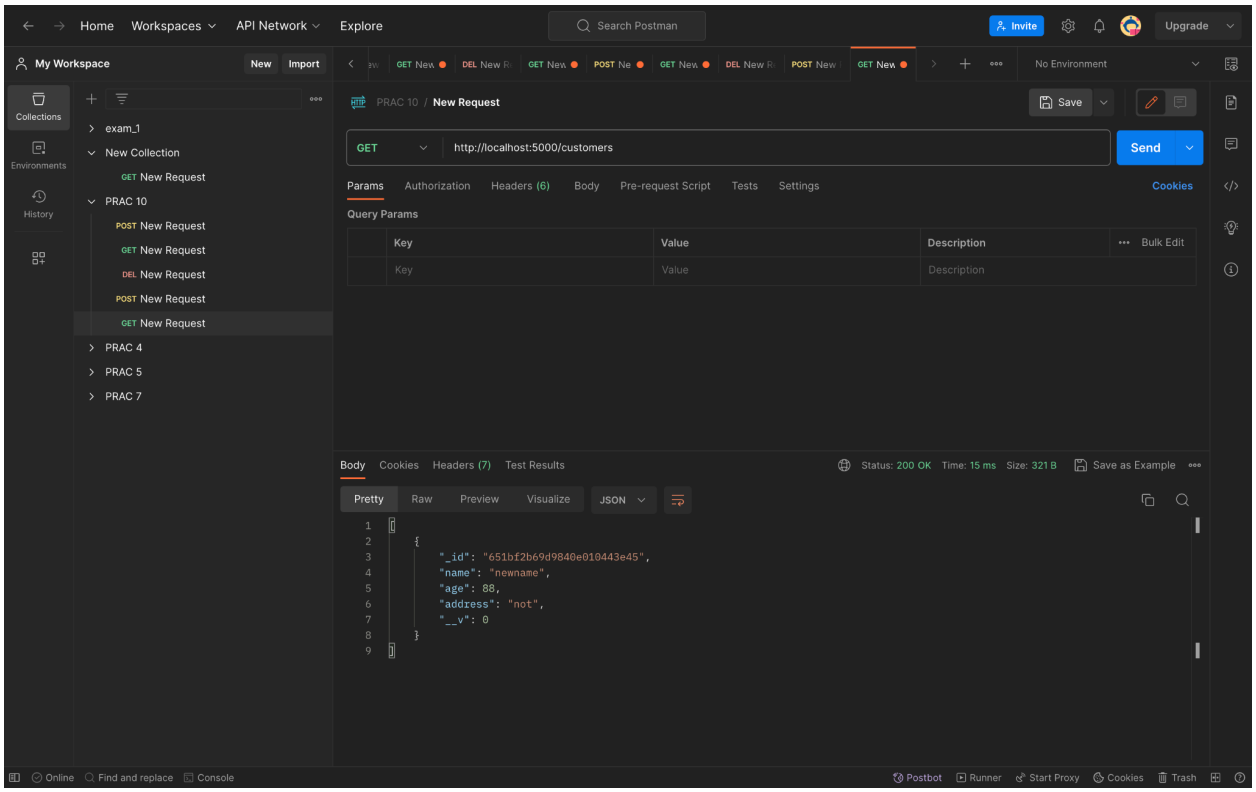

localhost:27017
Documents
books.customers
My Queries
Databases
Search
admin
books
books
customers
config
db2
local
student
books.customers
0
DOCUMENTS
1
INDEXES
Documents
Aggregations
Schema
Indexes
Validation
Filter
Type a query: { field: 'value' }
Explain
Reset
Find
Options
ADD DATA
EXPORT DATA
0 – 0 of 0
This collection has no data
It only takes a few seconds to import data from a JSON or CSV file.
Import Data
>_MONGOSH

→ Post data

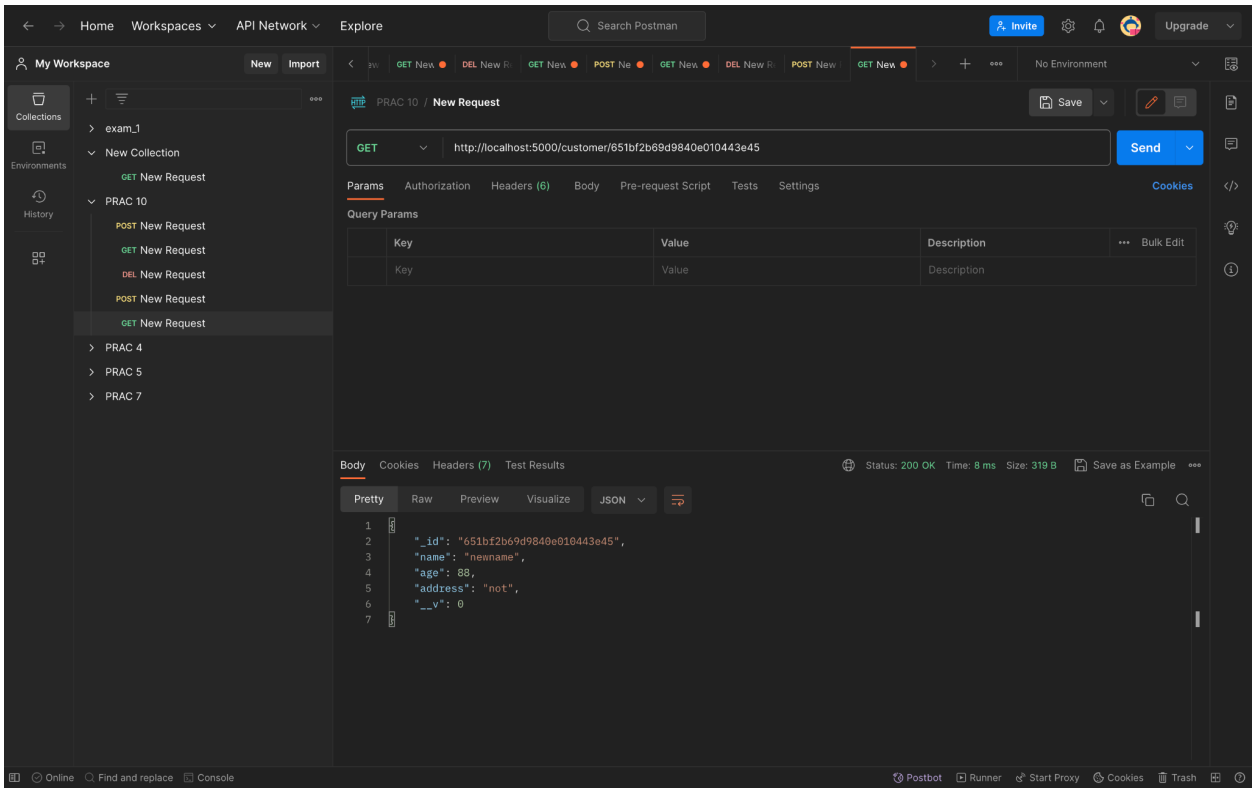

Home
Workspaces
API Network
Explore
Search Postman
Invite
Upgrade
My Workspace
New
Import
Collections
Environments
History
exam_1
New Collection
GET New Request
PRAC 10
POST New Request
GET New Request
DEL New Request
POST New Request
PRAC 4
PRAC 5
PRAC 7
No Environment
PRAC 10 / New Request
Save
POST
http://localhost:5000/customer/
Send
Params
Authorization
Headers (8)
Body
Pre-request Script
Tests
Settings
Cookies
none
form-data
x-www-form-urlencoded
raw
binary
GraphQL
JSON
Beautify
{
"name":"newname",
"age":"88",
"address":"not"
}
Body
Cookies
Headers (7)
Test Results
Status: 200 OK
Time: 36 ms
Size: 262 B
Save as Example
Pretty
Raw
Preview
Visualize
HTML
New Customer created successfully!
Online
Find and replace
Console
Postbot
Runner
Start Proxy
Cookies
Trash


localhost:27017
Documents
books.customers
My Queries
Databases
Search
admin
books
books
customers
config
db2
local
student
books.customers
0
DOCUMENTS
1
INDEXES
Documents
Aggregations
Schema
Indexes
Validation
Filter
Type a query: { field: 'value' }
Explain
Reset
Find
Options
ADD DATA
EXPORT DATA
1 - 1 of 1
_id: ObjectId('651bf3129d9840e010443e4a')
name: "newname"
age: 88
address: "not"
__v: 0
>_MONGOSH

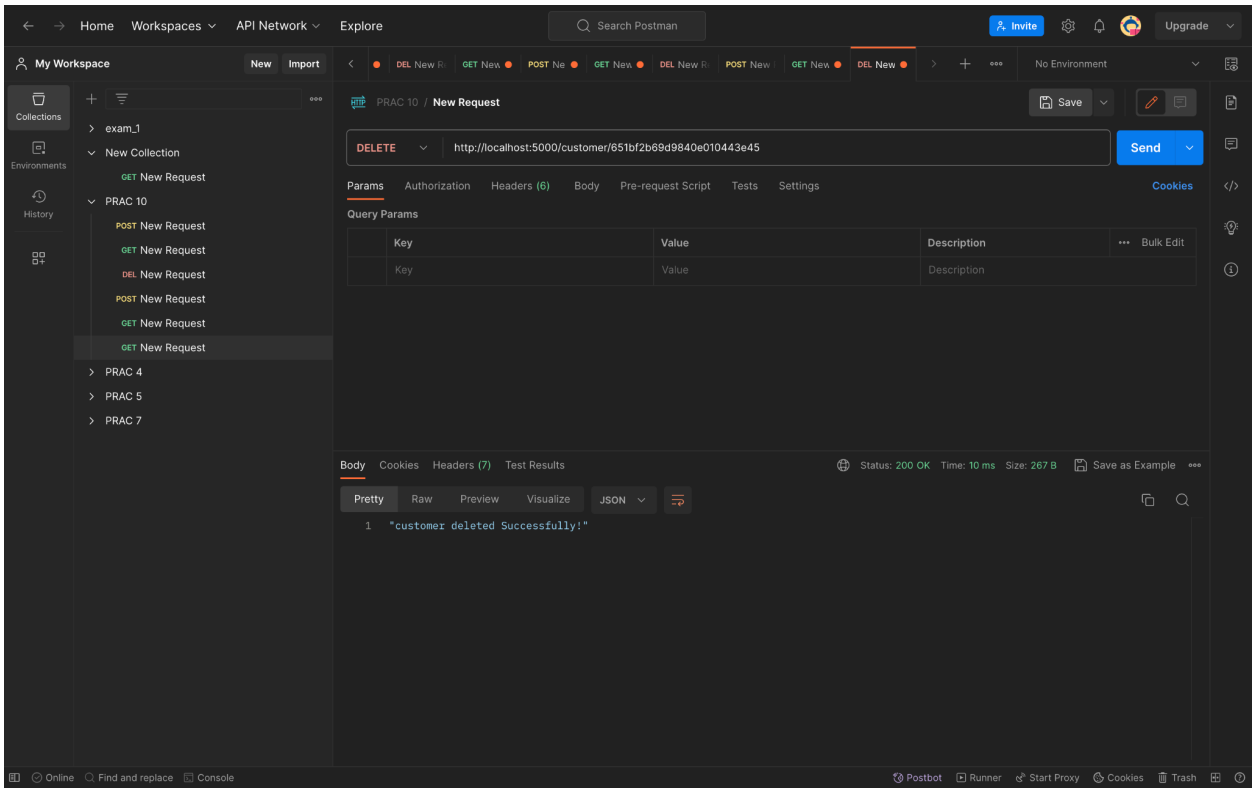
→ Get data


Home
Workspaces
API Network
Explore
Search Postman
Invite
Upgrade
My Workspace
New
Import
Collections
Environments
History
exam_1
New Collection
GET New Request
PRAC 10
POST New Request
GET New Request
DEL New Request
POST New Request
GET New Request
PRAC 4
PRAC 5
PRAC 7
No Environment
PRAC 10 / New Request
Save
GET
http://localhost:5000/customers
Send
Params
Authorization
Headers (6)
Body
Pre-request Script
Tests
Settings
Cookies
Query Params
Key
Value
Description
Bulk Edit
Body
Cookies
Headers (7)
Test Results
Status: 200 OK
Time: 15 ms
Size: 321 B
Save as Example
Pretty
Raw
Preview
Visualize
JSON
{
"_id": "651bf2b69d9840e010443e45",
"name": "newname",
"age": 88,
"address": "not",
"__v": 0
}
Online
Find and replace
Console
Postbot
Runner
Start Proxy
Cookies
Trash

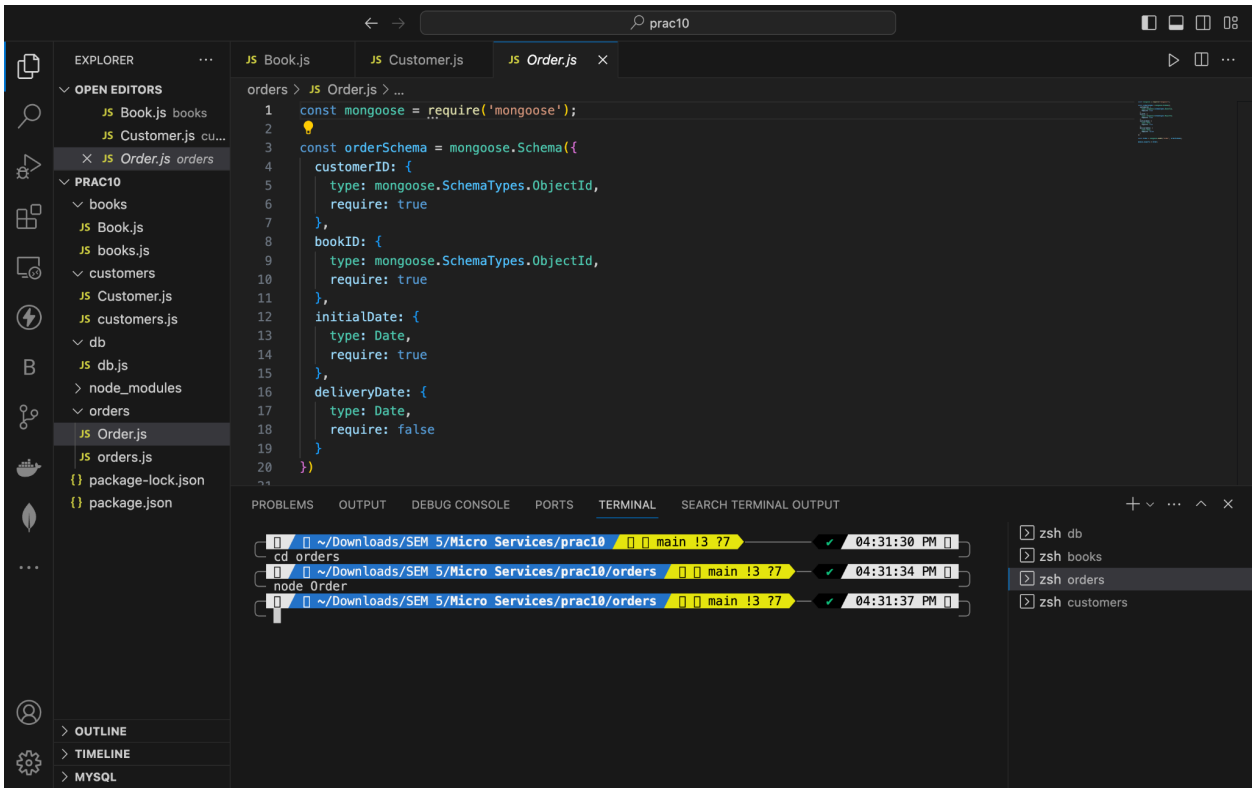
→ Get data by ID

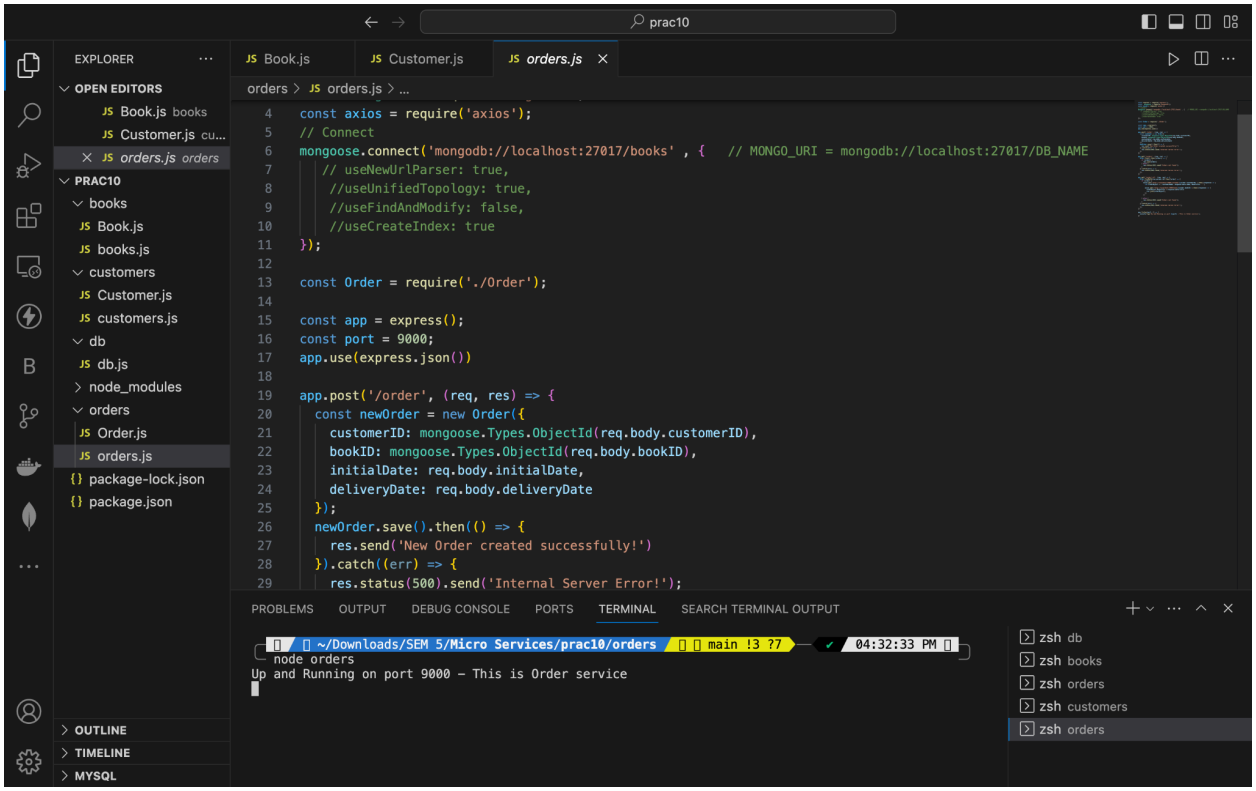


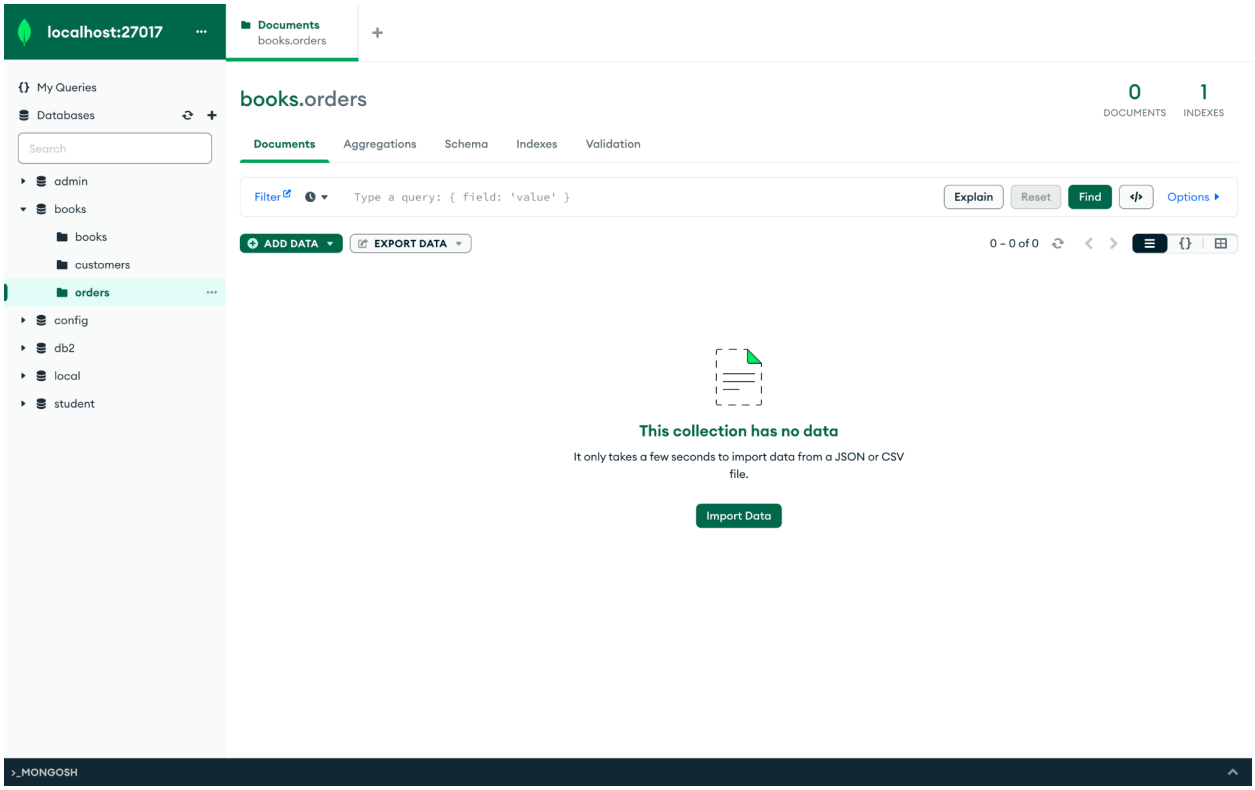
→ Delete data



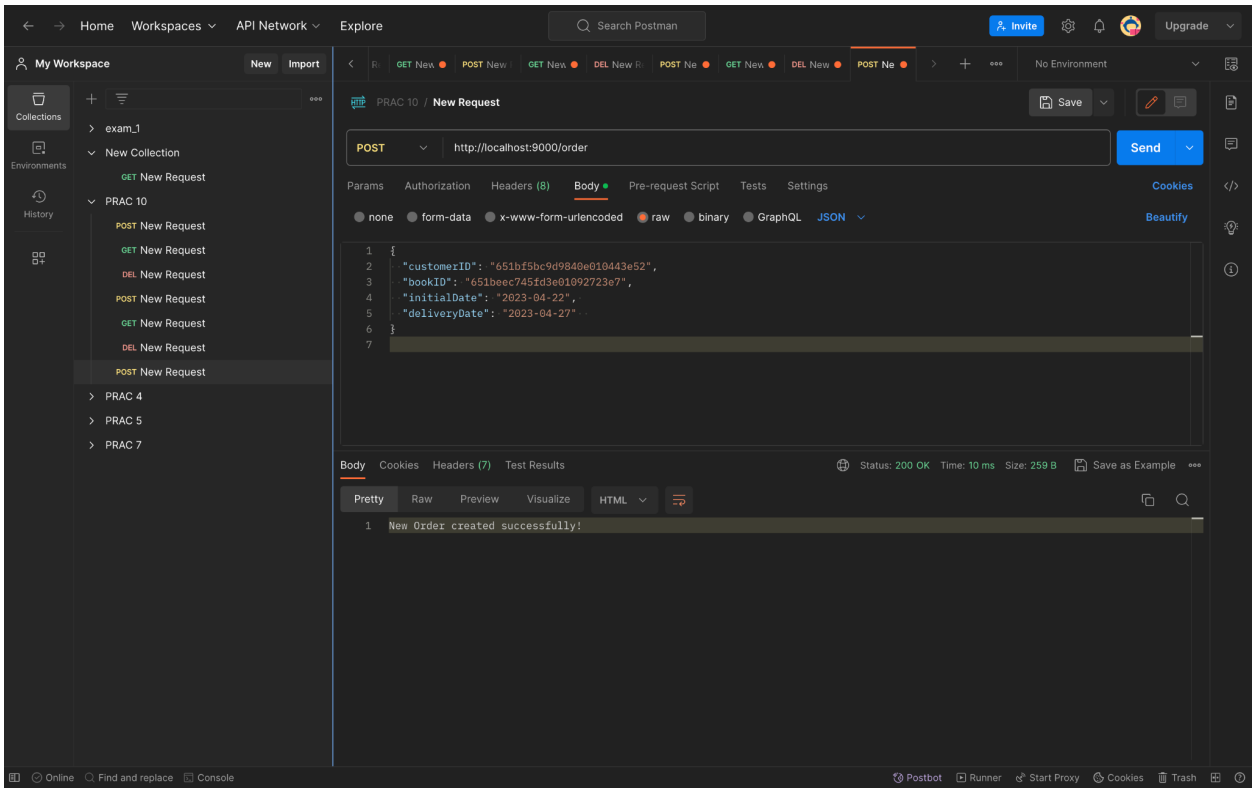
Practical 8.4: Creating Order Service.

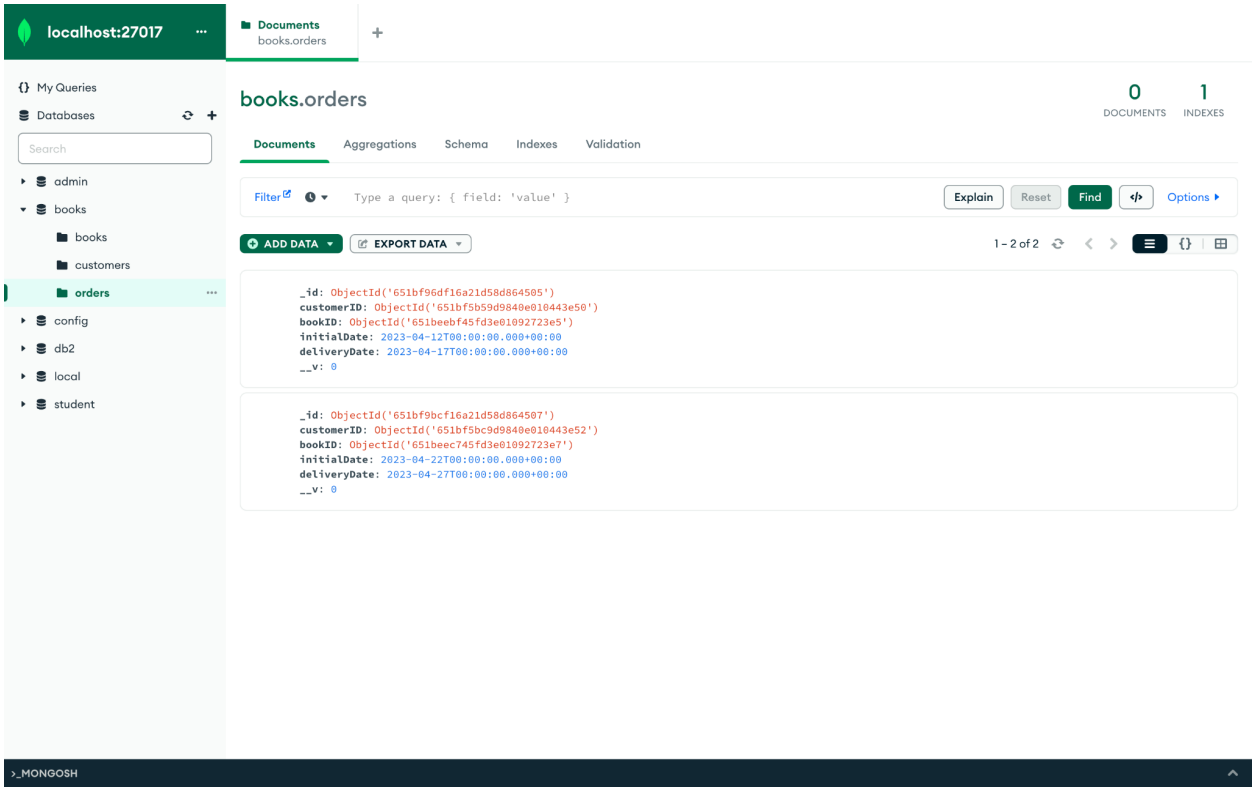




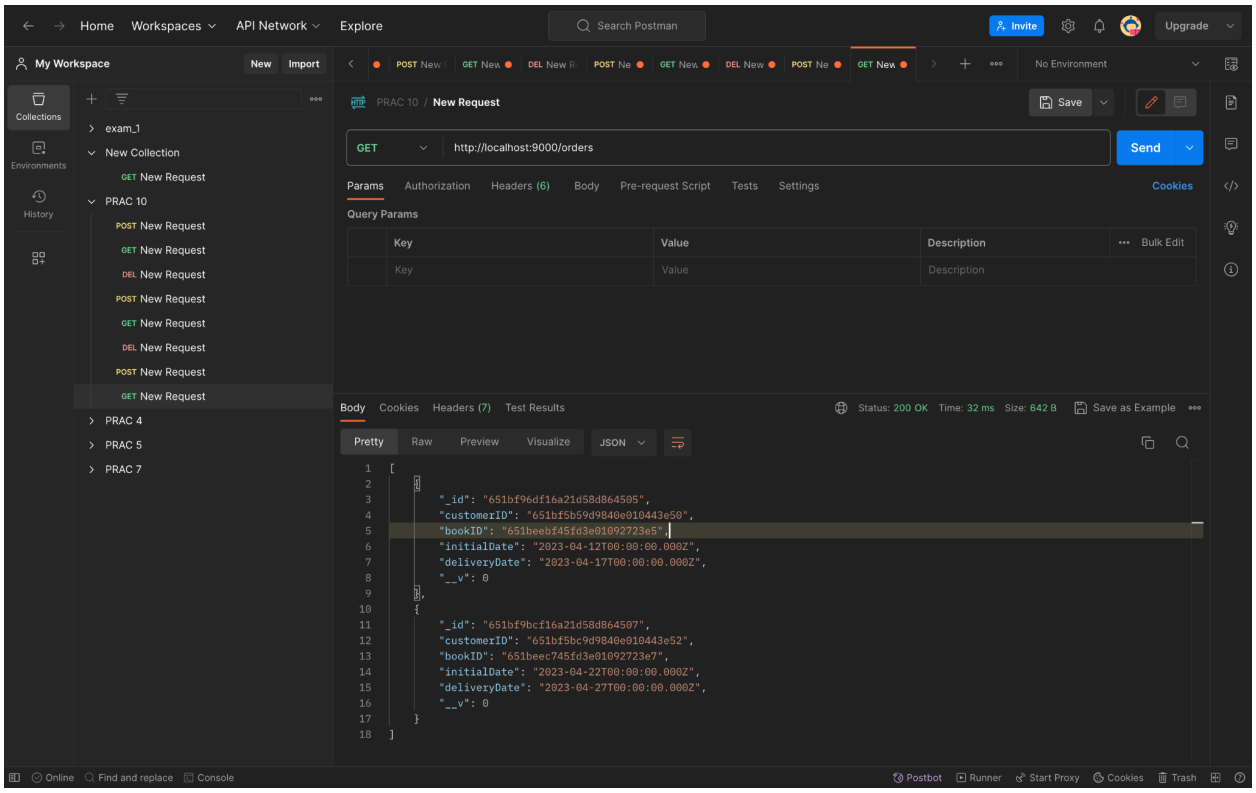

localhost:27017
Documents
books.orders
My Queries
Databases
Search
admin
books
books
customers
orders
config
db2
local
student
books.orders
0
DOCUMENTS
1
INDEXES
Documents
Aggregations
Schema
Indexes
Validation
Filter
Type a query: { field: 'value' }
Explain
Reset
Find
Options
ADD DATA
EXPORT DATA
0 – 0 of 0
This collection has no data
It only takes a few seconds to import data from a JSON or CSV file.
Import Data
>_MONGOSH

→ Post data

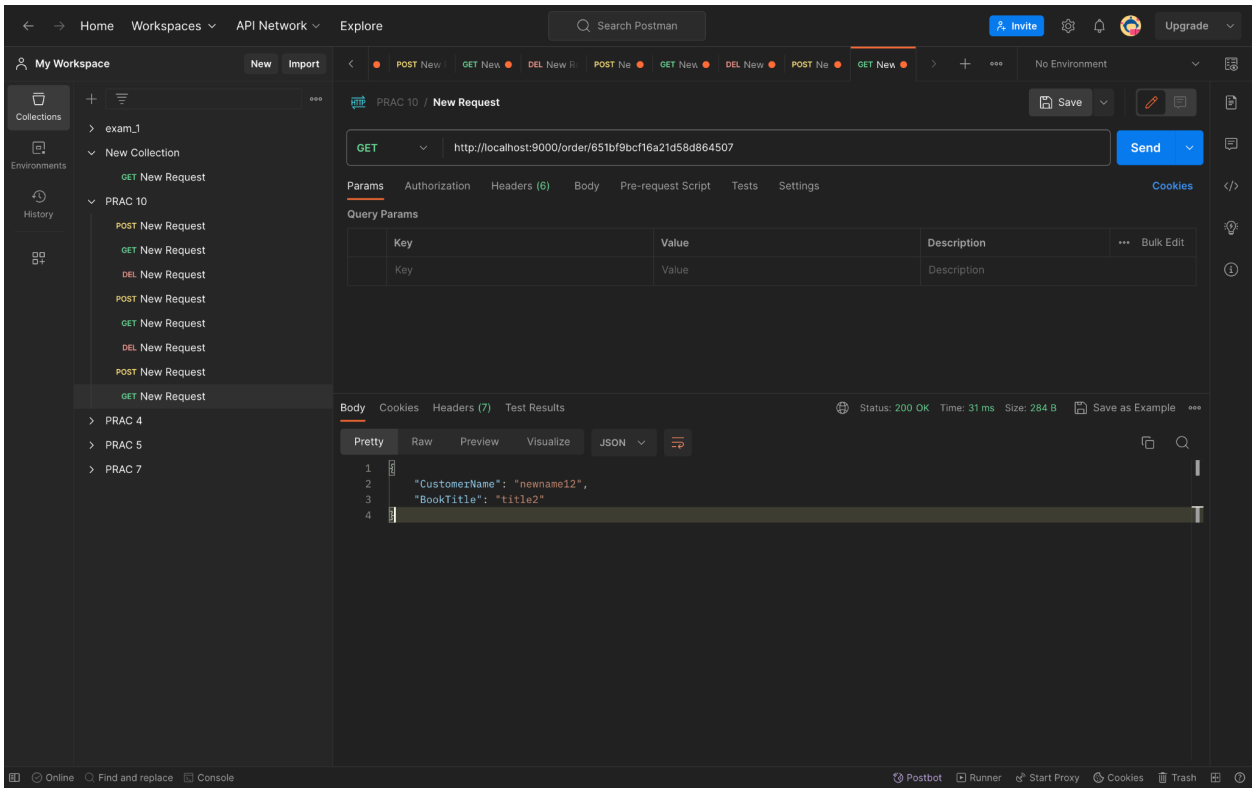

Home
Workspaces
API Network
Explore
Search Postman
Invite
Upgrade
My Workspace
New
Import
Collections
Environments
History
exam_1
New Collection
GET New Request
PRAC 10
POST New Request
GET New Request
DEL New Request
POST New Request
GET New Request
DEL New Request
POST New Request
PRAC 4
PRAC 5
PRAC 7
PRAC 10 / New Request
Save
POST
http://localhost:9000/order
Send
Params
Authorization
Headers (8)
Body
Pre-request Script
Tests
Settings
Cookies
none
form-data
x-www-form-urlencoded
raw
binary
GraphQL
JSON
Beautify
{
"customerID": "651bf5bc9d9840e010443e52",
"bookID": "651beec745fd3e01092723e7",
"initialDate": "2023-04-22",
"deliveryDate": "2023-04-27"
}
Body
Cookies
Headers (7)
Test Results
Status: 200 OK
Time: 10 ms
Size: 259 B
Save as Example
Pretty
Raw
Preview
Visualize
HTML
New Order created successfully!
Online
Find and replace
Console
Postbot
Runner
Start Proxy
Cookies
Trash

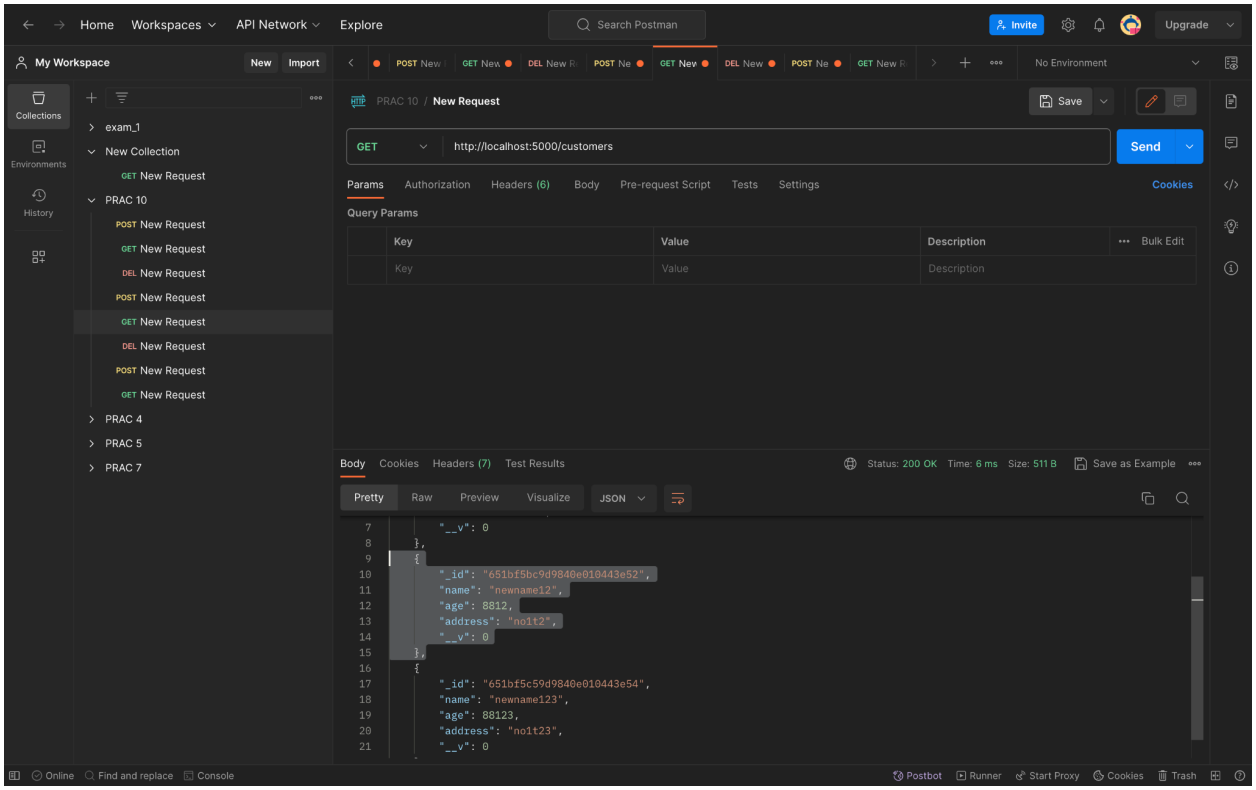

localhost:27017
Documents
books.orders
My Queries
Databases
Search
admin
books
books
customers
orders
config
db2
local
student
books.orders
0
DOCUMENTS
1
INDEXES
Documents
Aggregations
Schema
Indexes
Validation
Filter
Type a query: { field: 'value' }
Explain
Reset
Find
Options
ADD DATA
EXPORT DATA
1 - 2 of 2
_id: ObjectId('651bf96df16a21d58d864505')
customerID: ObjectId('651bf5b59d9840e010443e50')
bookID: ObjectId('651beebf45fd3e01092723e5')
initialDate: 2023-04-12T00:00:00.000+00:00
deliveryDate: 2023-04-17T00:00:00.000+00:00
__v: 0
_id: ObjectId('651bf9bcf16a21d58d864507')
customerID: ObjectId('651bf5bc9d9840e010443e52')
bookID: ObjectId('651beec745fd3e01092723e7')
initialDate: 2023-04-22T00:00:00.000+00:00
deliveryDate: 2023-04-27T00:00:00.000+00:00
__v: 0
>_MONGOSH

→ Get data



→ Get data like CustomerName and BookTitle by id of order




Home
Workspaces
API Network
Explore
Search Postman
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Upgrade
My Workspace
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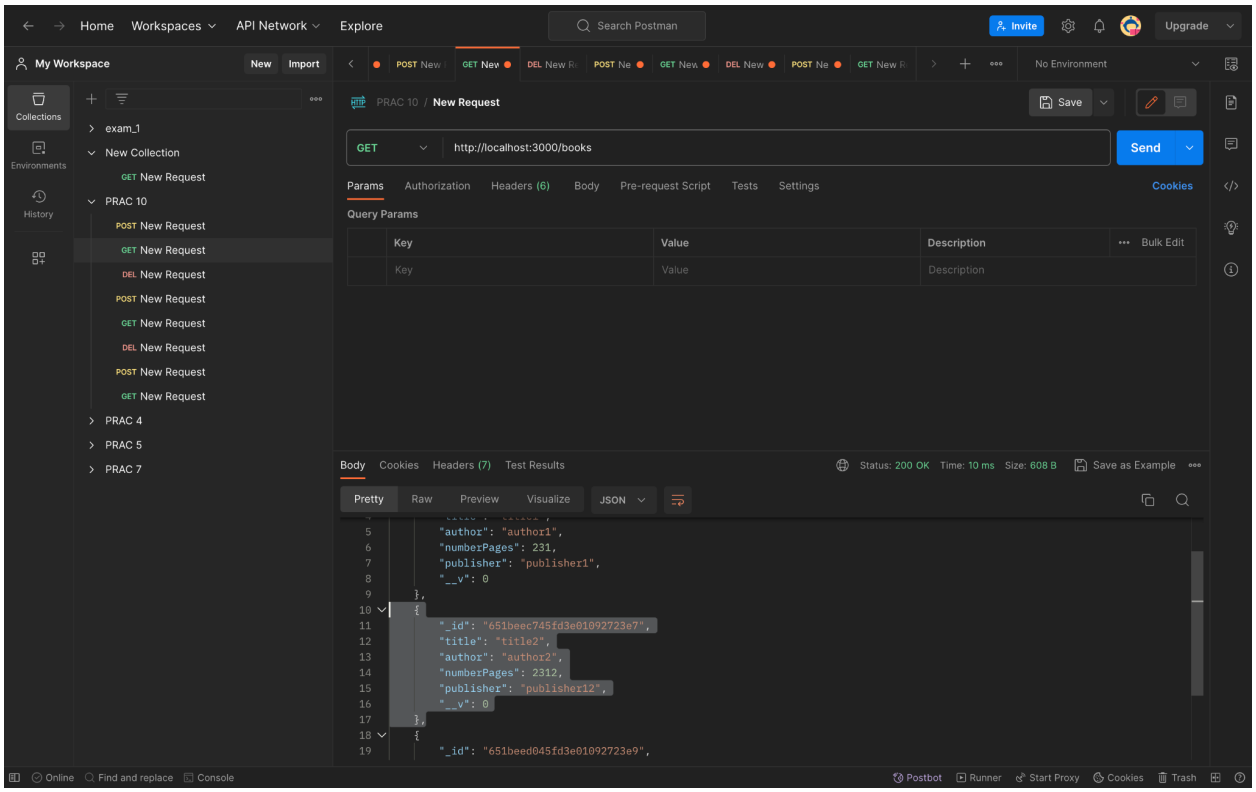
Environments
History
exam_1
New Collection
GET New Request
PRAC 10
POST New Request
GET New Request
DEL New Request
POST New Request
GET New Request
DEL New Request
POST New Request
GET New Request
PRAC 4
PRAC 5
PRAC 7
No Environment
PRAC 10 / New Request
Save
GET
http://localhost:5000/customers
Send
Params
Authorization
Headers (6)
Body
Pre-request Script
Tests
Settings
Cookies
Query Params
Key
Value
Description
Bulk Edit
Body
Cookies
Headers (7)
Test Results
Status: 200 OK
Time: 6 ms
Size: 511 B
Save as Example
Pretty
Raw
Preview
Visualize
JSON
"__v": 0
},
{
"_id": "651bf5bc9d9840e010443e52",
"name": "newname12",
"age": 8812,
"address": "no1t2",
"__v": 0
},
{
"_id": "651bf5c59d9840e010443e54",
"name": "newname123",
"age": 88123,
"address": "no1t23",
"__v": 0
Online
Find and replace
Console
Postbot
Runner
Start Proxy
Cookies
Trash


Home
Workspaces
API Network
Explore
Search Postman
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Upgrade
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New
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Collections
Environments
History
exam_1
New Collection
GET New Request
PRAC 10
POST New Request
GET New Request
DEL New Request
POST New Request
GET New Request
DEL New Request
POST New Request
GET New Request
PRAC 4
PRAC 5
PRAC 7
No Environment
PRAC 10 / New Request
Save
GET
http://localhost:3000/books
Send
Params
Authorization
Headers (6)
Body
Pre-request Script
Tests
Settings
Cookies
Query Params
Key
Value
Description
Bulk Edit
Body
Cookies
Headers (7)
Test Results
Status: 200 OK
Time: 10 ms
Size: 608 B
Save as Example
Pretty
Raw
Preview
Visualize
JSON
"author": "author1",
"numberPages": 231,
"publisher": "publisher1",
"__v": 0
},
{
"_id": "651beec745fd3e01092723e7",
"title": "title2",
"author": "author2",
"numberPages": 2312,
"publisher": "publisher12",
"__v": 0
},
{
"_id": "651beed045fd3e01092723e9",
Online
Find and replace
Console
Postbot
Runner
Start Proxy
Cookies
Trash