Sub-Team Repo Submission

1. Decision Summary and Component Considerations

Our sub team is responsible for handling the backend development of the game using Node.js. For this particular deliverable, our focus has been on implementing crucial functionalities, including user registration and login, as well as features for creating, deleting, and managing inventory quantities. The core user story we aim to fulfill with this deliverable is as follows: "Users should have the capability to place or remove objects from the game map using items stored in their inventory. To facilitate this, we've provided the means to alter the quantity of inventory items, making it possible to increase or decrease these quantities, with user-specific identifiers provided from client side.

2. Individual Contributions

Krystal: I am responsible for the sub-project repository setup, server implementation, MongoDB integration, user schema design, and the development of registration, login, and user profile display features, utilizing axios requests.

Tommy: I am responsible for developing the item inventory system, encompassing item models, controllers, and routes. These routes link to functions I've designed, which allow for the creation and deletion of items, adjustment of parameters (both incrementing and decrementing), and displaying all items associated with a specific user.

3. Documentation for TA Verification

To ensure a seamless verification process by your TA, it is imperative that we provide comprehensive details and instructions. The documentation is intended to confirm two key aspects:

a. Functionality Verification

User Actions:

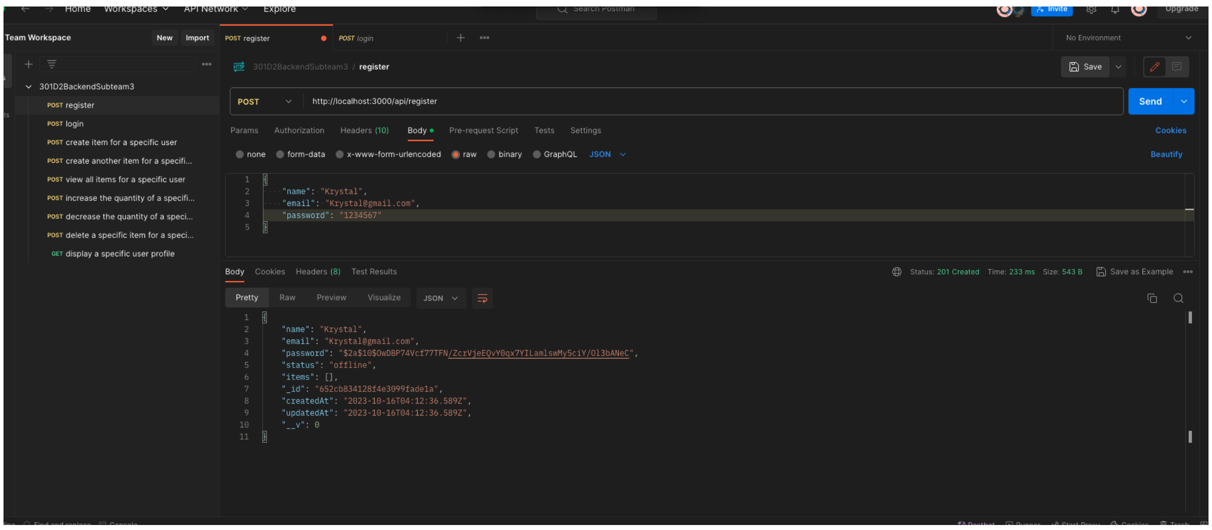
- User Registration: Users can register by providing required credentials and receive a confirmation message upon successful registration.
- User Login: Users can log in securely with their registered credentials.
- User Profile Display: The system displays user profiles with relevant information.

Item Management:

- Create Item: The ability to create new items, with all requisite details.
- Delete Item: Users can delete items from their inventory.
- Increase Parameter: Items' parameters can be incremented as needed.
- Decrease Parameter: Parameters can also be decreased.
- Show All Items: All items associated with a user are displayed.

b. Repository and Server Confirmation

1. User registration request:


Team Workspace
301D2BackendSubteam3
POST register
POST login
POST create item for a specific user
POST create another item for a specifi...
POST view all items for a specific user
POST increase the quantity of a specifi...
POST decrease the quantity of a speci...
POST delete a specific item for a speci...
GET display a specific user profile

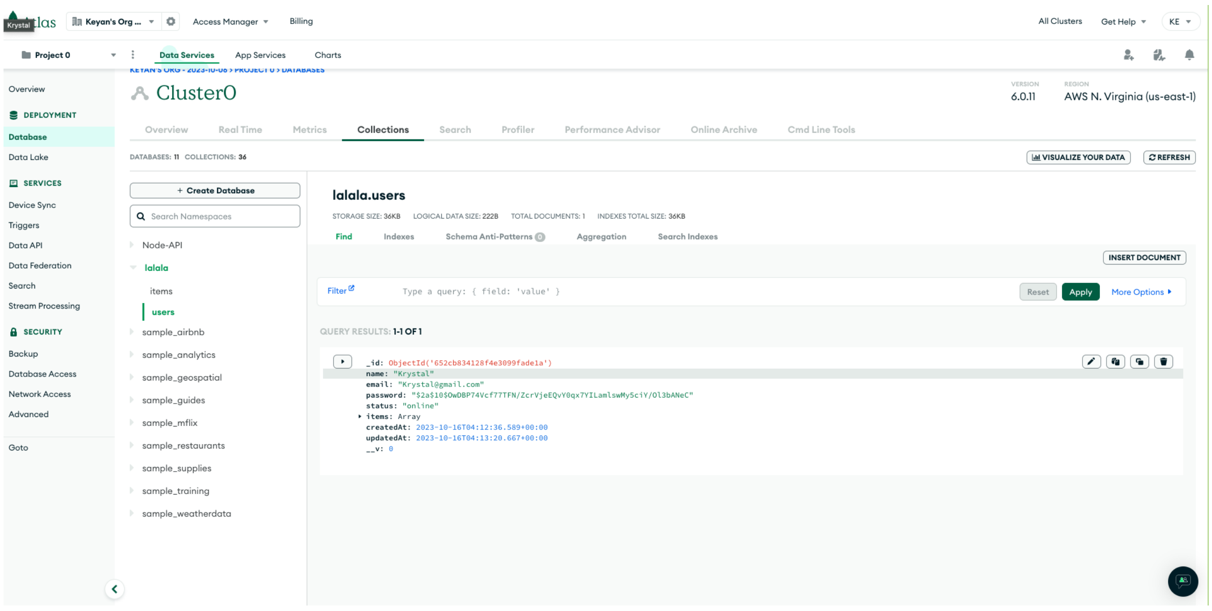
301D2BackendSubteam3 / register

POST http://localhost:3000/api/register

```
{
    "name": "Krystal",
    "email": "Krystal@gmail.com",
    "password": "1234567"
}
```

Status: 201 Created Time: 233 ms Size: 543 B

```
{
    "name": "Krystal",
    "email": "Krystal@gmail.com",
    "password": "$2a$10$OwDBP74Vcf77TFN/ZcrVjeEQvY0qx7YILamlswMy5ciY/Ol3bANeC",
    "status": "offline",
    "items": [],
    "_id": "652cb834128f4e3099fade1a",
    "createdAt": "2023-10-16T04:12:36.589Z",
    "updatedAt": "2023-10-16T04:12:36.589Z",
    "__v": 0
}
```



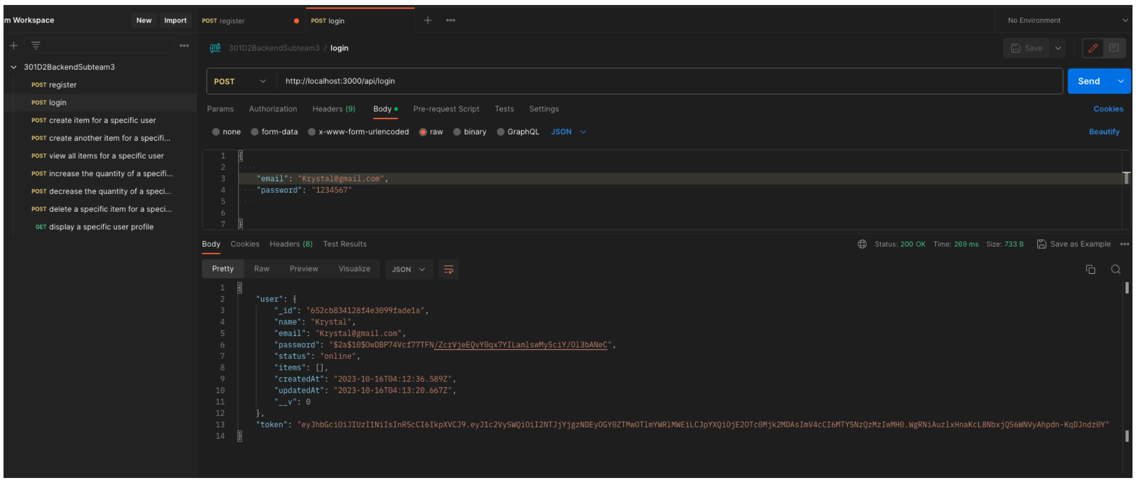
lalala.users

STORAGE SIZE: 36KB LOGICAL DATA SIZE: 222B TOTAL DOCUMENTS: 1 INDEXES TOTAL SIZE: 36KB

QUERY RESULTS: 1-1 OF 1

```
_id: ObjectId('652cb834128f4e3099fade1a')
name: "Krystal"
email: "Krystal@gmail.com"
password: "$2a$10$OwDBP74Vcf77TFN/ZcrVjeEQvY0qx7YILamlswMy5ciY/Ol3bANeC"
status: "online"
items: Array
createdAt: 2023-10-16T04:12:36.589+00:00
updatedAt: 2023-10-16T04:13:20.667+00:00
__v: 0
```

2. User login:

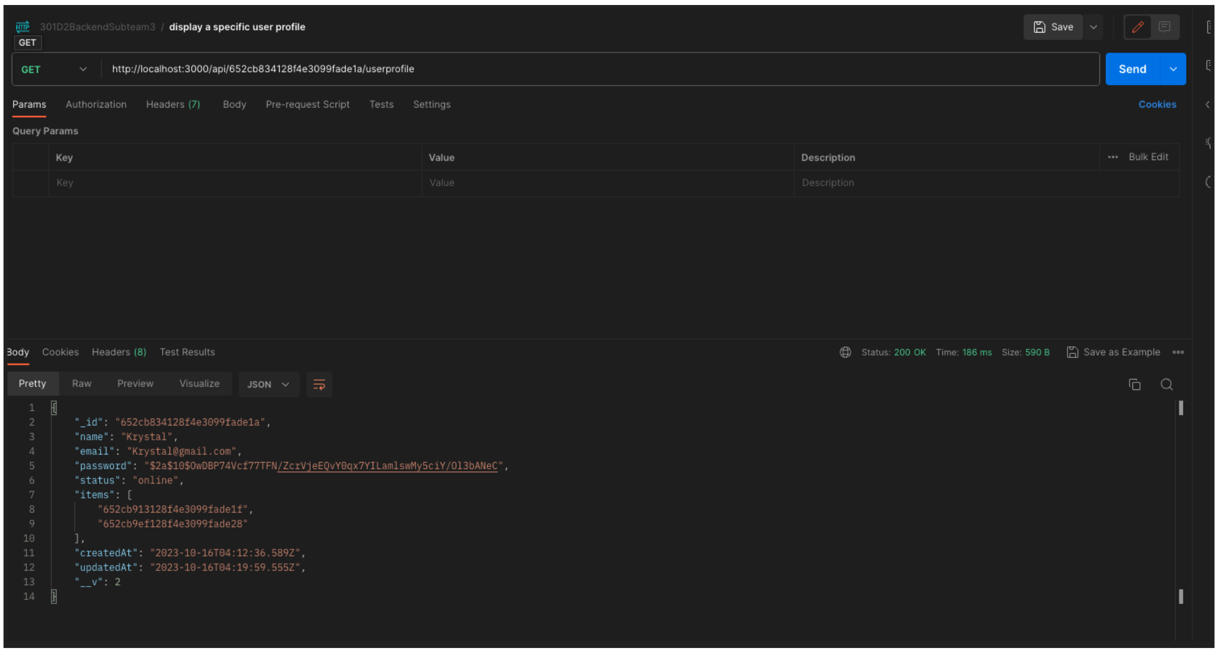

POST http://localhost:3000/api/login

```
{

    "email": "Krystal@gmail.com",
    "password": "1234567"

}
```

Status: 200 OK Time: 269 ms Size: 733 B

```
{
    "user": {
        "_id": "652cb834128f4e3099fade1a",
        "name": "Krystal",
        "email": "Krystal@gmail.com",
        "password": "$2a$10$OwDBP74Vcf77TFN/ZcrVjeEQvY0qx7YILamlswMy5ciY/O13bANeC",
        "status": "online",
        "items": [],
        "createdAt": "2023-10-16T04:12:36.589Z",
        "updatedAt": "2023-10-16T04:13:20.667Z",
        "__v": 0
    },
    "token": "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJ1c2VySWQiOiI2NTJjYjgzNDEyOGY0ZTMwOTlmYWRlMWEiLCJpYXQiOjE2OTc0Mjk2MDAsImV4cCI6MTY5NzQzMzIwMH0.WgRNiAuzlxHnaKcL8NbxjQS6WNVyAhpdn-KqDJndz0Y"
}
```

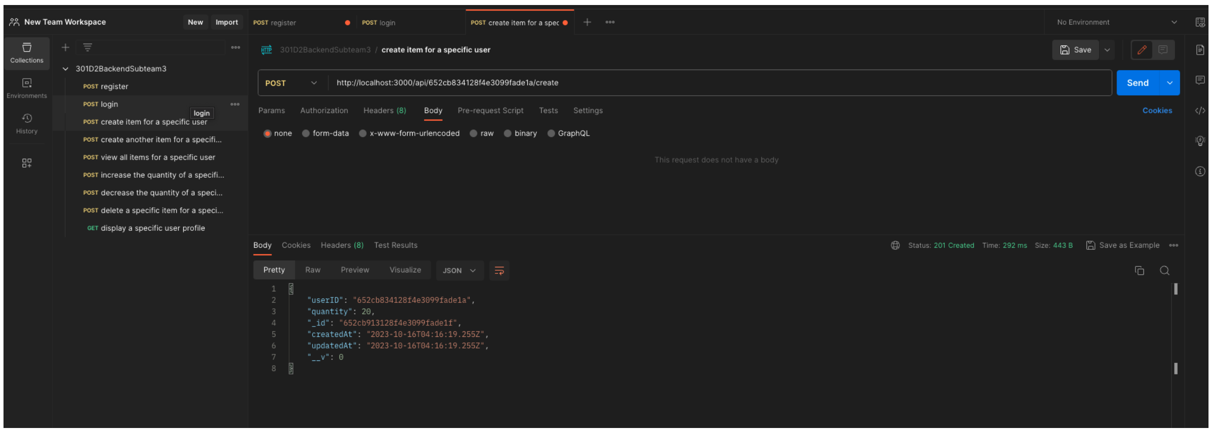
3. User profile:


GET http://localhost:3000/api/652cb834128f4e3099fade1a/userprofile

Status: 200 OK Time: 186 ms Size: 590 B

```
{
    "_id": "652cb834128f4e3099fade1a",
    "name": "Krystal",
    "email": "Krystal@gmail.com",
    "password": "$2a$10$OwDBP74Vcf77TFN/ZcrVjeEQvY0qx7YILamlswMy5ciY/O13bANeC",
    "status": "online",
    "items": [
        "652cb913128f4e3099fade1f",
        "652cb9ef128f4e3099fade28"
    ],
    "createdAt": "2023-10-16T04:12:36.589Z",
    "updatedAt": "2023-10-16T04:19:59.555Z",
    "__v": 2
}
```

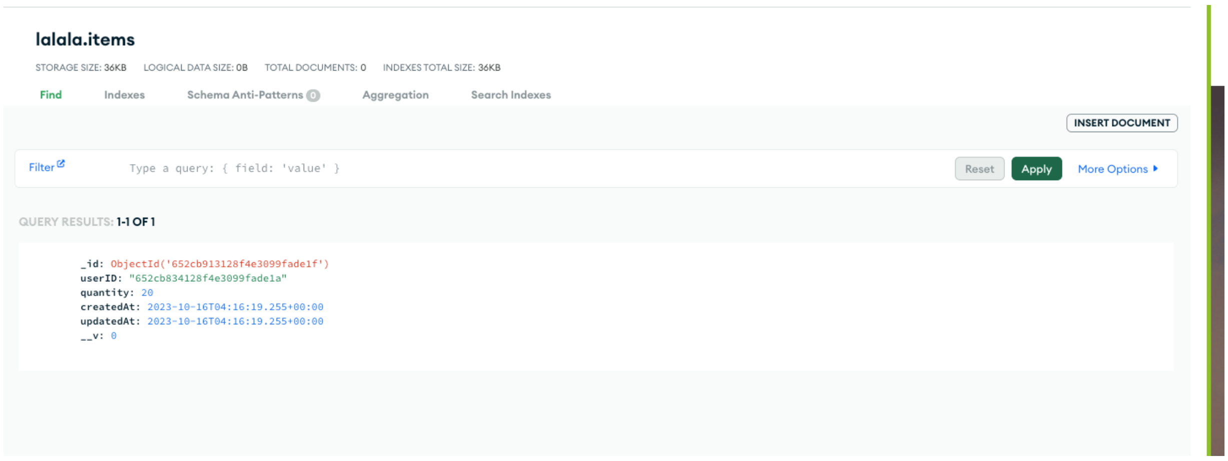
4. Create item:


POST http://localhost:3000/api/652cb834128f4e3099fade1a/create

This request does not have a body

Status: 201 Created Time: 292 ms Size: 443 B

```
{
    "userID": "652cb834128f4e3099fade1a",
    "quantity": 20,
    "_id": "652cb913128f4e3099fade1f",
    "createdAt": "2023-10-16T04:16:19.255Z",
    "updatedAt": "2023-10-16T04:16:19.255Z",
    "__v": 0
}
```

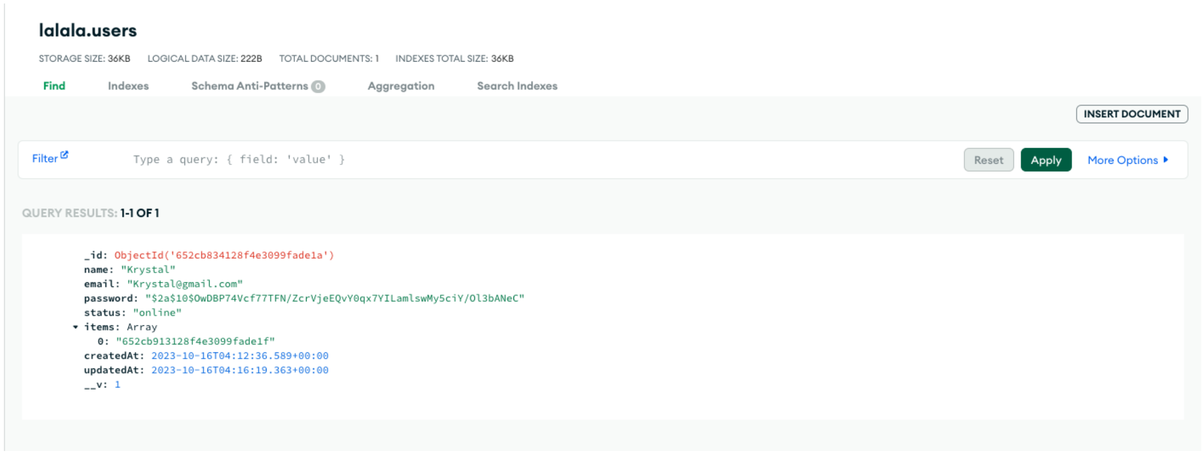


lalala.items

STORAGE SIZE: 36KB LOGICAL DATA SIZE: 0B TOTAL DOCUMENTS: 0 INDEXES TOTAL SIZE: 36KB

QUERY RESULTS: 1-1 OF 1

```
_id: ObjectId('652cb913128f4e3099fade1f')
userID: "652cb834128f4e3099fade1a"
quantity: 20
createdAt: 2023-10-16T04:16:19.255+00:00
updatedAt: 2023-10-16T04:16:19.255+00:00
__v: 0
```



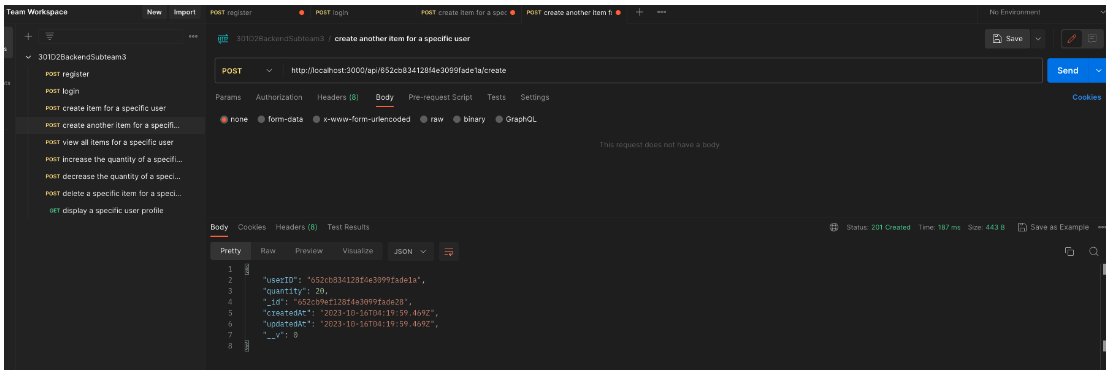
lalala.users

STORAGE SIZE: 36KB LOGICAL DATA SIZE: 222B TOTAL DOCUMENTS: 1 INDEXES TOTAL SIZE: 36KB

QUERY RESULTS: 1-1 OF 1

```
  _id: ObjectId('652cb834128f4e3099fade1a')
  name: "Krystal"
  email: "Krystal@gmail.com"
  password: "$2a$10$OwDBP74Vcf77TFN/ZcrVjeEQvY0qx7YILamlswMy5ciY/Ol3bANeC"
  status: "online"
▾ items: Array
    0: "652cb913128f4e3099fade1f"
  createdAt: 2023-10-16T04:12:36.589+00:00
  updatedAt: 2023-10-16T04:16:19.363+00:00
  __v: 1
```

5. Create Another item



Team Workspace
New
Import
POST register
POST login
POST create item for a spec
POST create another item fo
No Environment
301D2BackendSubteam3
POST register
POST login
POST create item for a specific user
POST create another item for a specifi...
POST view all items for a specific user
POST increase the quantity of a specifi...
POST decrease the quantity of a speci...
POST delete a specific item for a speci...
GET display a specific user profile
Save
Send
Params
Authorization
Headers (8)
Body
Pre-request Script
Tests
Settings
Cookies
none
form-data
x-www-form-urlencoded
raw
binary
GraphQL
Body
Cookies
Headers (8)
Test Results
Save as Example
Pretty
Raw
Preview
Visualize
JSON

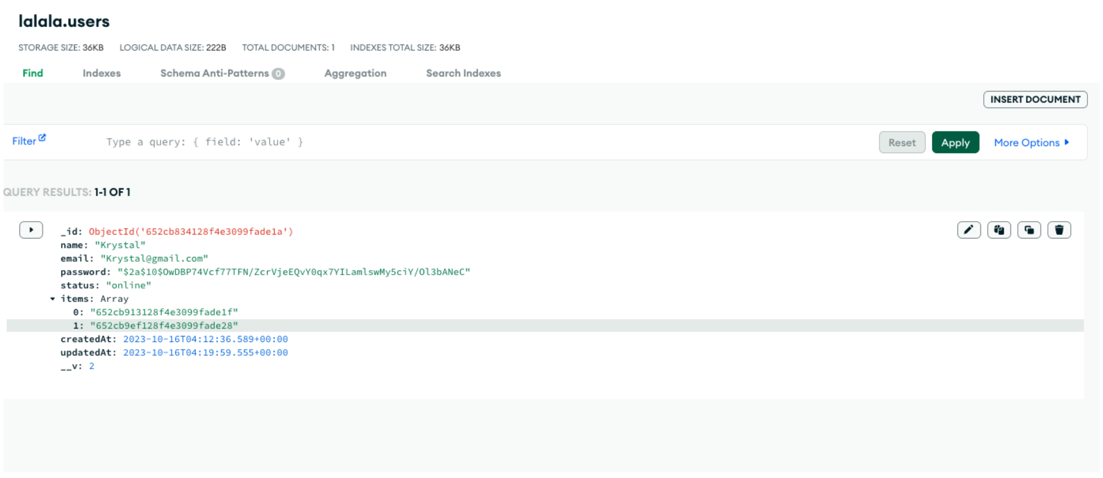
301D2BackendSubteam3 / create another item for a specific user

POST http://localhost:3000/api/652cb834128f4e3099fade1a/create

This request does not have a body

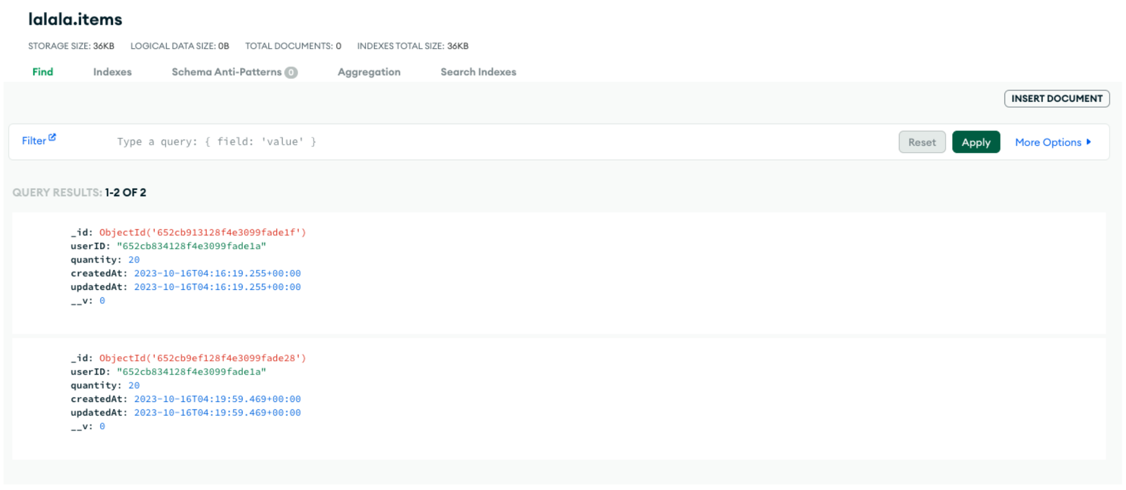
Status: 201 Created Time: 187 ms Size: 443 B

```
{
    "userID": "652cb834128f4e3099fade1a",
    "quantity": 20,
    "_id": "652cb9ef128f4e3099fade28",
    "createdAt": "2023-10-16T04:19:59.469Z",
    "updatedAt": "2023-10-16T04:19:59.469Z",
    "__v": 0
}
```


lalala.users
STORAGE SIZE: 36KB LOGICAL DATA SIZE: 222B TOTAL DOCUMENTS: 1 INDEXES TOTAL SIZE: 36KB
Find
Indexes
Schema Anti-Patterns 0
Aggregation
Search Indexes
INSERT DOCUMENT
Filter
Type a query: { field: 'value' }
Reset
Apply
More Options

QUERY RESULTS: 1-1 OF 1

```
_id: ObjectId('652cb834128f4e3099fade1a')
name: "Krystal"
email: "Krystal@gmail.com"
password: "$2a$10$OwDBP74Vcf77TFN/ZcrVjeEQvY0qx7YILamlswMy5ciY/Ol3bANeC"
status: "online"
items: Array
  0: "652cb913128f4e3099fade1f"
  1: "652cb9ef128f4e3099fade28"
createdAt: 2023-10-16T04:12:36.589+00:00
updatedAt: 2023-10-16T04:19:59.555+00:00
__v: 2
```

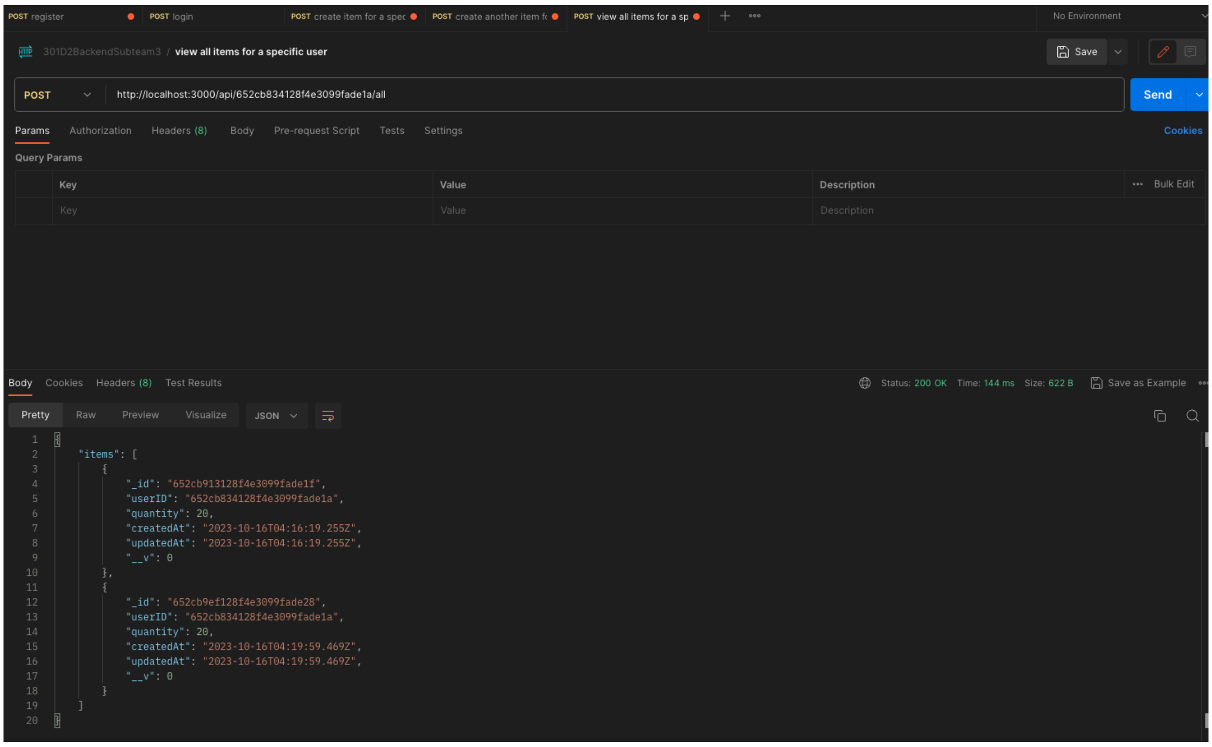

lalala.items
STORAGE SIZE: 36KB LOGICAL DATA SIZE: 0B TOTAL DOCUMENTS: 0 INDEXES TOTAL SIZE: 36KB
Find
Indexes
Schema Anti-Patterns 0
Aggregation
Search Indexes
INSERT DOCUMENT
Filter
Type a query: { field: 'value' }
Reset
Apply
More Options

QUERY RESULTS: 1-2 OF 2

```
_id: ObjectId('652cb913128f4e3099fade1f')
userID: "652cb834128f4e3099fade1a"
quantity: 20
createdAt: 2023-10-16T04:16:19.255+00:00
updatedAt: 2023-10-16T04:16:19.255+00:00
__v: 0
```

```
_id: ObjectId('652cb9ef128f4e3099fade28')
userID: "652cb834128f4e3099fade1a"
quantity: 20
createdAt: 2023-10-16T04:19:59.469+00:00
updatedAt: 2023-10-16T04:19:59.469+00:00
__v: 0
```

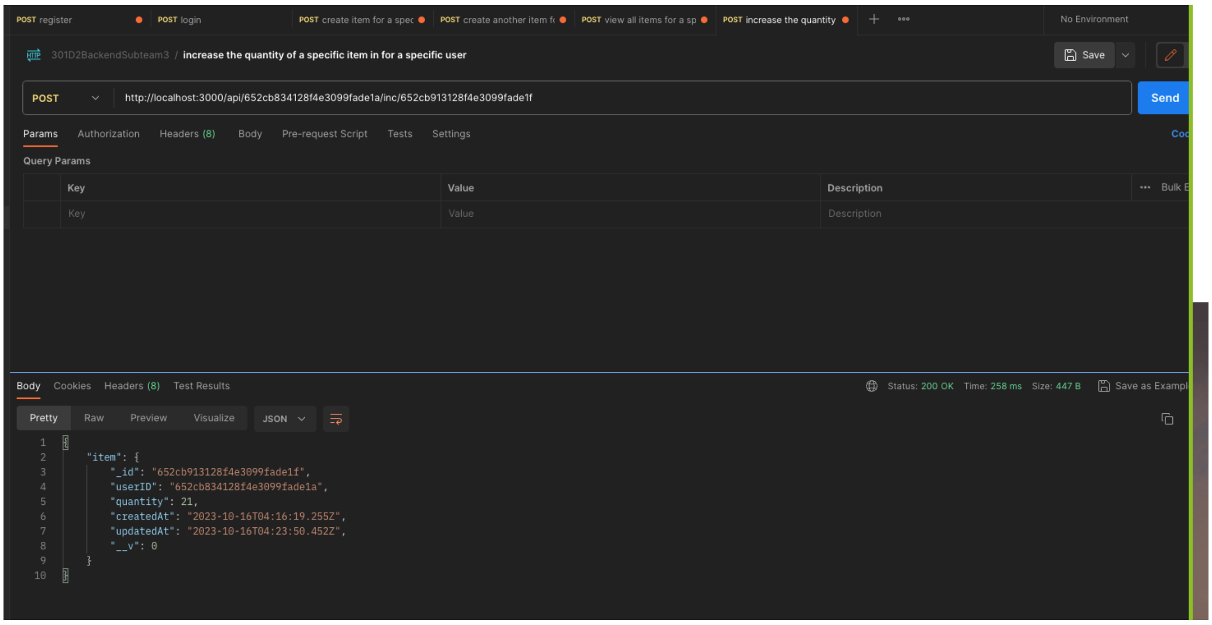
6. Show all items for a specific user



POST http://localhost:3000/api/652cb834128f4e3099fade1a/all

```
{
    "items": [
        {
            "_id": "652cb913128f4e3099fade1f",
            "userID": "652cb834128f4e3099fade1a",
            "quantity": 20,
            "createdAt": "2023-10-16T04:16:19.255Z",
            "updatedAt": "2023-10-16T04:16:19.255Z",
            "__v": 0
        },
        {
            "_id": "652cb9ef128f4e3099fade28",
            "userID": "652cb834128f4e3099fade1a",
            "quantity": 20,
            "createdAt": "2023-10-16T04:19:59.469Z",
            "updatedAt": "2023-10-16T04:19:59.469Z",
            "__v": 0
        }
    ]
}
```

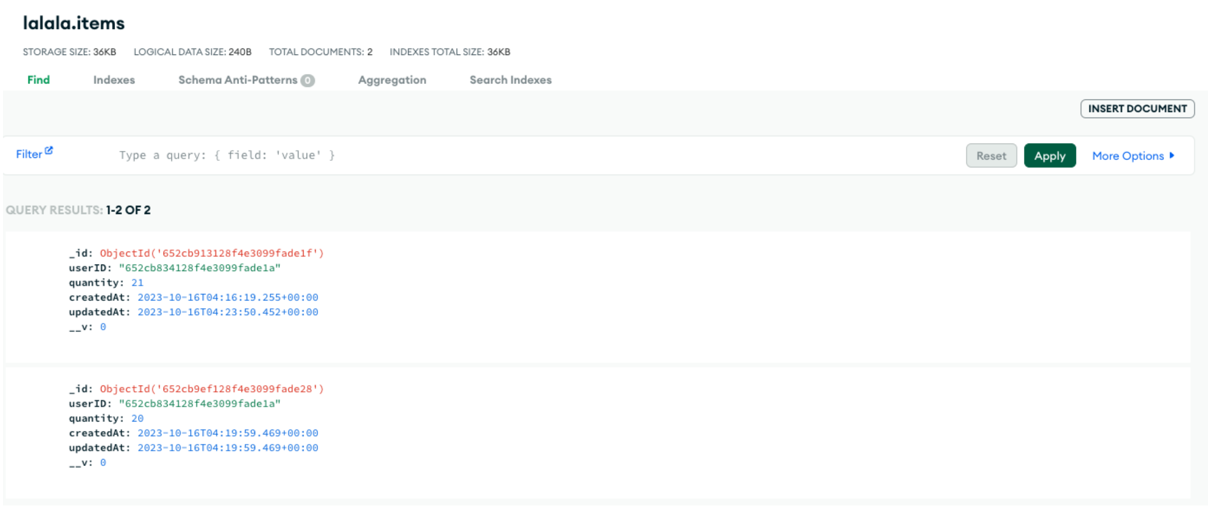
7. Increase quantity for a specific item under a specific user



POST http://localhost:3000/api/652cb834128f4e3099fade1a/inc/652cb913128f4e3099fade1f

Status: 200 OK Time: 258 ms Size: 447 B

```
{
    "item": {
        "_id": "652cb913128f4e3099fade1f",
        "userID": "652cb834128f4e3099fade1a",
        "quantity": 21,
        "createdAt": "2023-10-16T04:16:19.255Z",
        "updatedAt": "2023-10-16T04:23:50.452Z",
        "__v": 0
    }
}
```



lalala.items

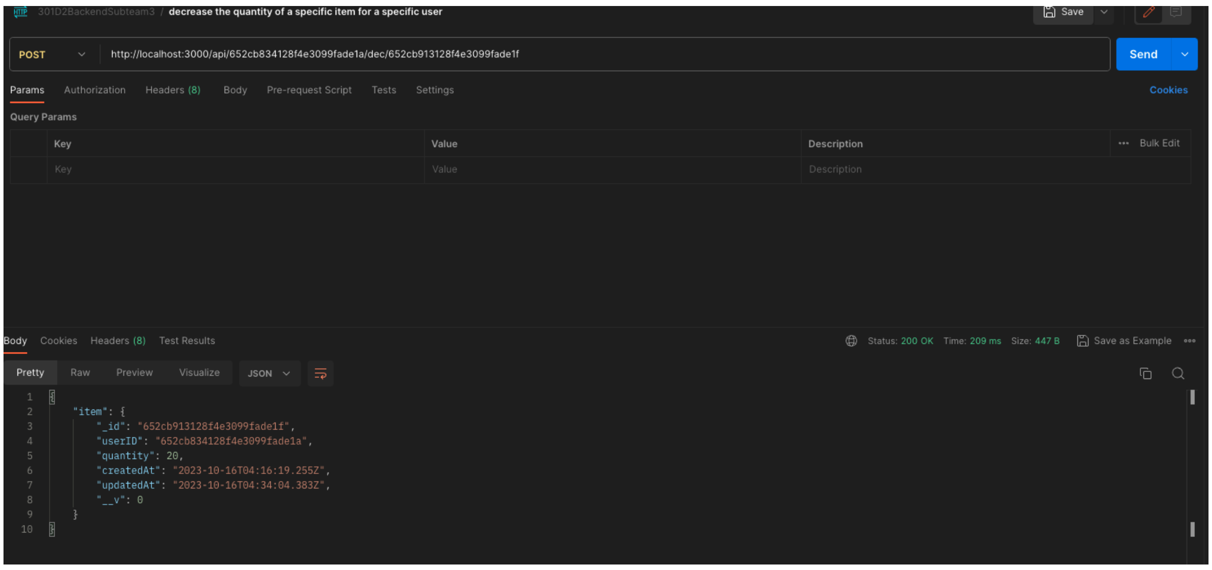
STORAGE SIZE: 36KB LOGICAL DATA SIZE: 240B TOTAL DOCUMENTS: 2 INDEXES TOTAL SIZE: 36KB

QUERY RESULTS: 1-2 OF 2

```
_id: ObjectId('652cb913128f4e3099fade1f')
userID: "652cb834128f4e3099fade1a"
quantity: 21
createdAt: 2023-10-16T04:16:19.255+00:00
updatedAt: 2023-10-16T04:23:50.452+00:00
__v: 0
```

```
_id: ObjectId('652cb9ef128f4e3099fade28')
userID: "652cb834128f4e3099fade1a"
quantity: 20
createdAt: 2023-10-16T04:19:59.469+00:00
updatedAt: 2023-10-16T04:19:59.469+00:00
__v: 0
```

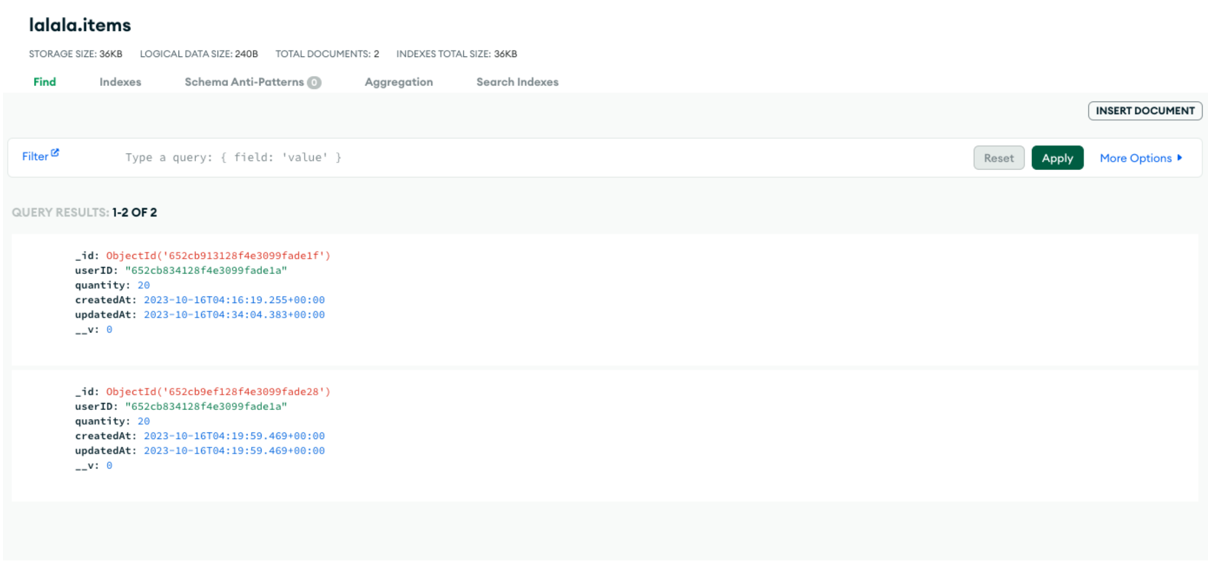
8. Decrease quality for a specific item under a specific user



POST http://localhost:3000/api/652cb834128f4e3099fade1a/dec/652cb913128f4e3099fade1f

Status: 200 OK Time: 209 ms Size: 447 B

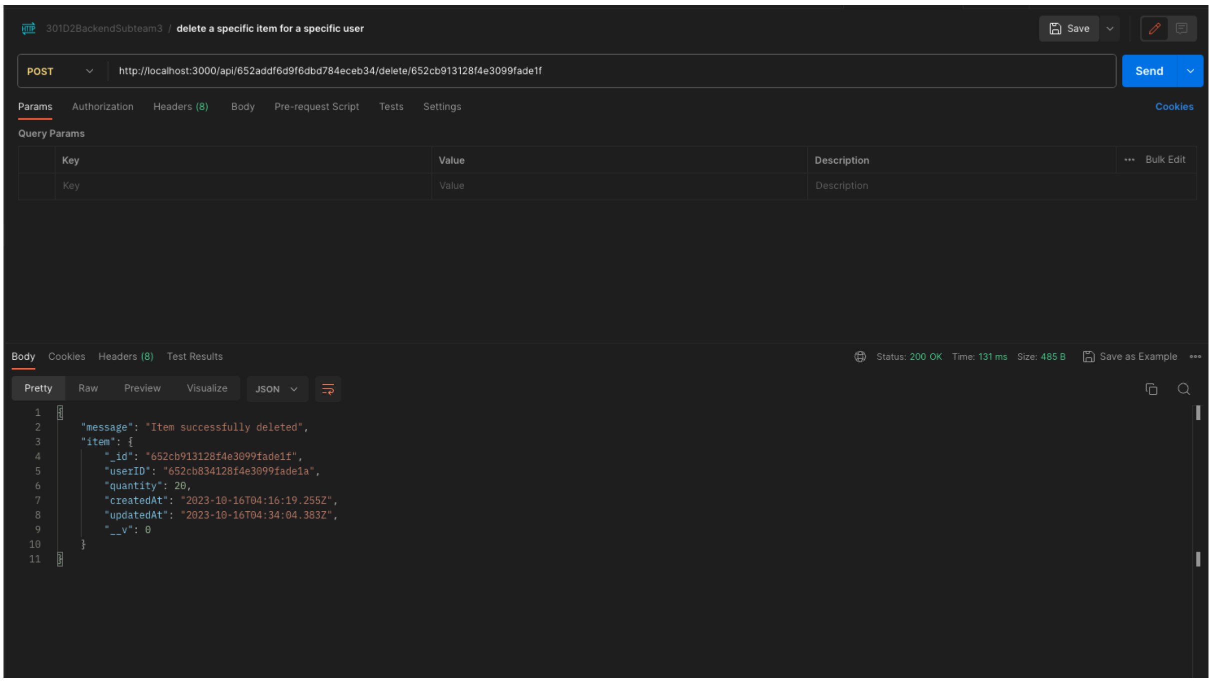
```
{
    "item": {
        "_id": "652cb913128f4e3099fade1f",
        "userID": "652cb834128f4e3099fade1a",
        "quantity": 20,
        "createdAt": "2023-10-16T04:16:19.255Z",
        "updatedAt": "2023-10-16T04:34:04.383Z",
        "__v": 0
    }
}
```


lalala.items
STORAGE SIZE: 36KB LOGICAL DATA SIZE: 240B TOTAL DOCUMENTS: 2 INDEXES TOTAL SIZE: 36KB
Find Indexes Schema Anti-Patterns 0 Aggregation Search Indexes
INSERT DOCUMENT
Filter
Type a query: { field: 'value' }
Reset Apply More Options
QUERY RESULTS: 1-2 OF 2

```
_id: ObjectId('652cb913128f4e3099fade1f')
userID: "652cb834128f4e3099fade1a"
quantity: 20
createdAt: 2023-10-16T04:16:19.255+00:00
updatedAt: 2023-10-16T04:34:04.383+00:00
__v: 0
```

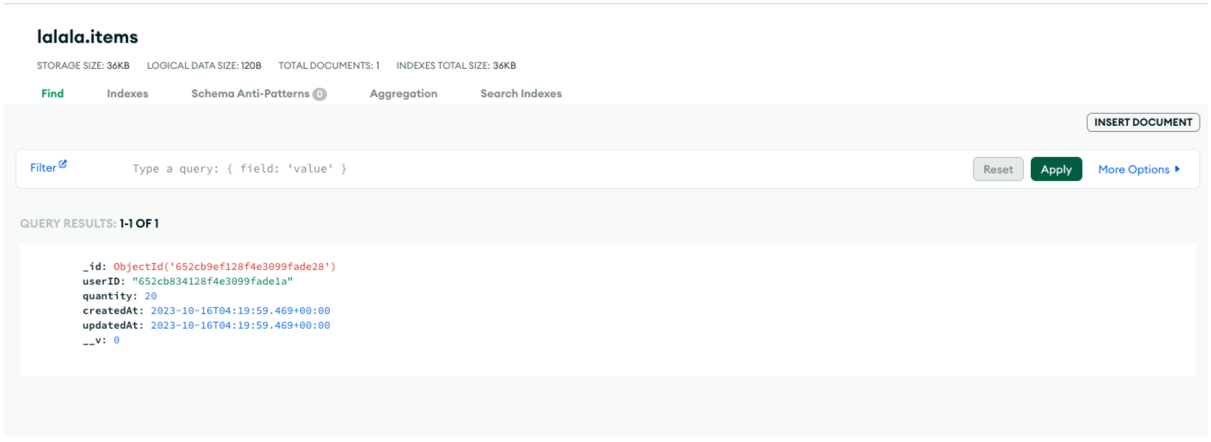
```
_id: ObjectId('652cb9ef128f4e3099fade28')
userID: "652cb834128f4e3099fade1a"
quantity: 20
createdAt: 2023-10-16T04:19:59.469+00:00
updatedAt: 2023-10-16T04:19:59.469+00:00
__v: 0
```

9. Delete a specific item under a user


301D2BackendSubteam3 / delete a specific item for a specific user
Save
POST
Send
Params Authorization Headers (8) Body Pre-request Script Tests Settings
Cookies
Query Params
Key Value Description Bulk Edit
Body Cookies Headers (8) Test Results
Status: 200 OK Time: 131 ms Size: 485 B
Save as Example
Pretty Raw Preview Visualize JSON

POST http://localhost:3000/api/652addf6d9f6dbd784eceb34/delete/652cb913128f4e3099fade1f

```
{
    "message": "Item successfully deleted",
    "item": {
        "_id": "652cb913128f4e3099fade1f",
        "userID": "652cb834128f4e3099fade1a",
        "quantity": 20,
        "createdAt": "2023-10-16T04:16:19.255Z",
        "updatedAt": "2023-10-16T04:34:04.383Z",
        "__v": 0
    }
}
```


lalala.items
STORAGE SIZE: 36KB LOGICAL DATA SIZE: 120B TOTAL DOCUMENTS: 1 INDEXES TOTAL SIZE: 36KB
Find Indexes Schema Anti-Patterns 0 Aggregation Search Indexes
INSERT DOCUMENT
Filter
Type a query: { field: 'value' }
Reset Apply More Options
QUERY RESULTS: 1-1 OF 1

```
_id: ObjectId('652cb9ef128f4e3099fade28')
userID: "652cb834128f4e3099fade1a"
quantity: 20
createdAt: 2023-10-16T04:19:59.469+00:00
updatedAt: 2023-10-16T04:19:59.469+00:00
__v: 0
```

4. Your application (see deployment section below for details)

1. Clone the Repository:

- Go to the GitHub repository for your sub-project: https://github.com/csc301-2023-fall/deliverable-2-31-3-miaokey2-gongke.
- Click on the "Code" button and copy the repository URL: https://github.com/csc301-2023-fall/deliverable-2-31-3-miaokey2-gongke.git.
- Open your terminal and navigate to the directory where you want to clone the project.
- Run the following command to clone the repository:
  git clone https://github.com/csc301-2023-fall/deliverable-2-31-3-miaokey2-gongke.git

2. Connect to MongoDB Atlas:

- Visit https://account.mongodb.com/account/login in your web browser.
- Provide your email and accept the invitation to access the database. This will establish a connection to your MongoDB Atlas database.

3. Initialize and Run the Project:

- Open your terminal and navigate to the project folder (the one you cloned).
- Run the following commands to set up the project:
  npm install
  npm start
- You should see messages indicating that the server is running on port 3000 and that the database connection has been established.

4. Testing the Project:

- To test the project, your group uses Postman. You can access the Postman request collection for testing by providing your email.
- By following these steps, you'll have the project up and running on your local machine, and you'll be able to use Postman for testing the backend functionalities.