

LOGIN:

The screenshot shows a browser-based API testing interface. The URL is `localhost:3000/login`. The method is set to `POST`. The `Body` tab is selected, showing the following JSON payload:

```
[{"username": "Roope", "password": "dollar1"}, {}]
```

The response status is `200 OK`, time `85 ms`, and size `456 B`. The response body is:

```
{"success":true,"message":"Login OK","username":"Roope", "token": "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9. eyJ1c2VybmFtZTg6MTIwMjIyNjEwOTQyLCJleHAiOjE3NjU3MzI3MDA9. jjpLiUo9r36-1KvQF9ibvTXE2txz7QfUz465ITV"}
```

Kuvan tokeni lisätään Authorization-välilehdelle Type: Bearer Token
POST Lisätään kirja POST komennolla
<http://localhost:3000/book>:

The screenshot shows the Postman interface with the following details:

- URL: `http://localhost:3000/book`
- Method: POST
- Headers:
 - Content-Type: application/json
 - Content-Length: 113
- Body:
 - Key: name Value: Uninvited Guests by Marjorie Liu
 - Key: author Value: Douglas Adams
 - Key: idn Value: 978-0510-11756-3
 - Key: key Value: key
- Response status: Status 200 OK Time: 9 ms Size: 143 B
- Response body:

```
[{"fieldCount":0,"affectedRows":1,"insertId":4,"info":"","serverStatus":1,"warningStatus":0,"changedRows":0}]
```

GET Katsotaan kaikki kirjat :

```
GET http://localhost:3000/book

Params: Authorization: Bearer Token Headers: Content-Type: application/json Body: {"token": "eyJhbGciOiJIUzI1NiJ9.CK6qgjVc9rey."}
Select Headers: Content-Type: application/json
Type: application/json
Token: eyJhbGciOiJIUzI1NiJ9.CK6qgjVc9rey.

The authentication header will be automatically generated when you send the request. Learn more about authentication.

Body Cookies Headers: Content-Type: application/json Test Results
Pretty Raw Preview JSON
Status: 200 OK Time: 3 ms Size: 968 B
[{"id_book": 1, "name": "PHP Basic", "author": "Bob Jones", "isbn": "123-456-789-111-x"}, {"id_book": 2, "name": "SQL basics", "author": "Mike Smith", "isbn": "123-456-789-222-z"}, {"id_book": 3, "name": "Java Programming", "author": "James Stroustrup", "isbn": "123-456-789-333-1"}, {"id_book": 4, "name": "C++ Programming", "author": "Bjarne Stroustrup", "isbn": "123-456-789-444-0"}, {"id_book": 5, "name": "Linux Administration", "author": "Adam Osborne", "isbn": "998-991-0-1116-3"}]
```

Koska sinne on jostain ilmestynyt
id_book 5 NULL rivi päivitetään se PUT
komenolla:

HTTP POST /api/books/5

Headers: Content-Type: application/json

Body:

```
[{"id": 5, "name": "Joulukuun pÄÄsi", "author": "Jussi Vuoren", "isbn": "666-555-444-333"}]
```

Response:

```
HTTP/1.1 200 OK
Content-Type: application/json
Content-Length: 133

[{"id": 5, "name": "Joulukuun pÄÄsi", "author": "Jussi Vuoren", "isbn": "666-555-444-333"}]
```

status check:

```
|mysql> select * from book|
```

| id_book | name | author | isbn |
|---------|----------------------------------|-------------------|-------------------|
| 1 | PHP Basic | Bob Jones | 123-456-789-111-x |
| 2 | Statistics | Lisa Smith | 222-333-444-555-y |
| 3 | The C Programming Language | Denis Richie | 222-333-222-333 |
| 4 | The C++ Programming Language | Bjarne Stroustrup | 222-777-666-111 |
| 5 | Juopohullun päiväkirja | Juha Vuorinen | 666-555-444-333 |
| 6 | Linnuradnan käskirja liftareille | Douglas Adams | 978-951-0-11756-3 |

Sitten huomattiin että kirjassa on sivut ihan liisterissä ja kirja joudutaan hävittämään **DELETE** komennolla:

The screenshot shows the Postman application interface with the following details:

- URL:** `http://localhost:3000/books/5`
- Method:** `DELETE`
- Response Status:** `200 OK`
- Response Time:** `9 ms`
- Response Size:** `342 B`
- Body (JSON):**

```
[{"field": "id", "affectedRows": 1, "insertId": 0, "info": "Rows matched: 1 Changed: 1 Warnings: 0", "serverStatus": 2, "warningStatus": 0, "changedRows": 1}]
```
- Headers:**
 - Content-Type: application/json
 - Date: Sun, 22 Jul 2018 11:48:53 GMT
 - X-Powered-By: Express
- Request Headers:**
 - Authorization: Bearer Token
 - Content-Type: application/json
- Code Snippets:** A snippet titled "HTTP DELETE Request" is visible.

status check:

HTTP://localhost:3000/book

GET → http://localhost:3000/book

Params Authentication Headers (10) Body Scripts Settings Code Cookies

Type Bearer Token Token eyRhbGUDIiBzIiNisjS5zC6WkpqVCJkay...

The authorization header will be automatically generated when you send the request. Learn more about Authorization

Body Cookies Headers (7) Test Results

Status: 200 OK Time: 4 ms Size: 716 B

Pretty Raw Previous JSON ▾

1 [{"id": "book_1", "name": "PHP Basic", "author": "Bob Jones", "isbn": "123-456-789-111-x"}, {"id": "book_2", "name": "Statistics", "author": "Lisa Smith", "isbn": "222-333-444-555-y"}, {"id": "book_3", "name": "The C Programming Language", "author": "Dennis Ritchie", "isbn": "222-333-222-333-z"}, {"id": "book_4", "name": "The C++ Programming Language", "author": "Bjarne Stroustrup", "isbn": "222-777-666-111-1"}, {"id": "book_5", "name": "Introduction to Java", "author": "Douglas Adams", "isbn": "998-000-00-111-3"}]

PROBLEMS OUTPUT SWIMMING CONSOLE TERMINAL PORTS POSTMAN CONSOLE

[redacted] switching path(s), • *
1
| id:book_1,
| name: "PHP Basic",
| author: "Bob Jones",
| isbn: "123-456-789-111-x"
|
| id:book_2,
| name: "Statistics",
| author: "Lisa Smith",
| isbn: "222-333-444-555-y"
|
| id:book_3,
| name: "The C Programming Language",
| author: "Dennis Ritchie",
| isbn: "222-333-222-333-z"
|
| id:book_4,
| name: "The C++ Programming Language",
| author: "Bjarne Stroustrup",
| isbn: "222-777-666-111-1"
|
| id:book_5,
| name: "Introduction to Java",
| author: "Douglas Adams",
| isbn: "998-000-00-111-3"
|
GET /book 200 1.562 ms - 479

Borroweriin luodana POST komennolla uusi lainaaja käytetään tällä kertaan raw jsonia, eikä x-www-form-urlencoded:

```
POST /borrower
Content-Type: application/json
{
  "fname": "Tonttu",
  "lname": "Tomera",
  "streetAddress": "Pajakylä 3"
}
```

Status 200 OK Time: 9 ms Size: 343 B
[{"fieldCount":0,"affectedRows":1,"insertId":1,"info":(),"serverStatus":2,"warningStatus":0,"changedRows":0}]

Tsekataan lainaajat GET:

```
GET /borrower
Content-Type: application/json
{
  "key": "val"
}
```

Status 200 OK Time: 4 ms Size: 407 B
[{"id_borrower":1,"fname":"Tonttu","lname":"Tomera","streetAddress":"Pajakylä 3"}, {"id_borrower":2,"fname":"Joulu","lname":"Vihreä","streetAddress":"Kielekatu 1"}, {"id_borrower":3,"fname":"Lasse","lname":"Lainaja","streetAddress":"Korvatunturi"}]

Huomaattiin että Lasse Lainaaja olikin oikeasti joulun riesa Grinch ja tokenikin ehti vanhentua tässä välissä. Uusittiin Tokeni ja päivitettiin PUT komennolla id1

```
POST /login
Content-Type: application/json
{
  "username": "lasse",
  "password": "dollar"
}
```

Status 200 OK Time: 56 ms Size: 496 B
{"success":true,"message":"Login OK","username":"Lasse","token": "eyJhbGciOiJIUzI1NiJ9.eyJzdWIiOiIxMjM0NTY3ODkwIiwibmFtZSI6IkJpbmFkIiwic2lnbmF0dXJlIjoiZW52aW9yIiwidXNlcm5hbWUiOiJsb2dpbiIsImV4cCI6MTUxOTQwOTUwMSwiaWF0IjoxNTE5MDUwOTUwLCJpYXQiOjE1MTUwNDUwOTV9"}
curl -i localhost:3000/login
HTTP/1.1 200 OK
Content-Type: application/json; charset=utf-8
Content-Length: 199
Date: Mon, 27 Mar 2017 11:48:19 GMT
Server: Apache/2.4.10 (Ubuntu)
X-Powered-By: PHP/7.0.10-1+deb.sury.org~jessie
X-Content-Type-Options: nosniff
X-Frame-Options: SAMEORIGIN
X-XSS-Protection: 1; mode=block
Set-Cookie: token=eyJhbGciOiJIUzI1NiJ9.eyJzdWIiOiIxMjM0NTY3ODkwIiwibmFtZSI6IkJpbmFkIiwic2lnbmF0dXJlIjoiZW52aW9yIiwidXNlcm5hbWUiOiJsb2dpbiIsImV4cCI6MTUxOTQwOTUwMSwiaWF0IjoxNTE5MDUwOTUwLCJpYXQiOjE1MTUwNDUwOTV9; expires=Mon, 27 Mar 2017 11:48:19 GMT; path=/; secure; HttpOnly

Body Cookies Headers (7) Test Results
Pretty Raw Preview JSON

PUT /borrower/1
Content-Type: application/json
{
 "fname": "Grinch",
 "lname": "Vihreä",
 "streetAddress": "Kielekatu 1"
}

Status 200 OK Time: 5 ms Size: 363 B
[{"fieldCount":0,"affectedRows":1,"insertId":1,"info":(),"serverStatus":2,"warningStatus":0,"changedRows":0}]

mysql> select * from borrower;
+-----+-----+-----+-----+
| id_borrower | fname | lname | streetAddress |
+-----+-----+-----+-----+
| 1 | Grinch | Vihreä | Kielekatu 1 |
| 2 | Joulu | Pukki | Korvatunturi |
| 3 | Tonttu | Tomera | Pajakylä 3 |
+-----+-----+-----+-----+
3 rows in set (0.00 sec)

Grinch ei pilaa täitä joulua, niin annetaan sille DELETEä:

```
DELETE /borrower/1
Content-Type: application/json
```

Status 200 OK Time: 9 ms Size: 242 B
[{"fieldCount":0,"affectedRows":1,"insertId":1,"info":(),"serverStatus":2,"warningStatus":0,"changedRows":0}]

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS POSTMAN CONSOLE
[endless] watching path(s): /*
curl -i localhost:3000/borrower/1
HTTP/1.1 200 OK
Content-Type: application/json; charset=utf-8
Content-Length: 147
Date: Mon, 27 Mar 2017 11:48:21 GMT
Server: Apache/2.4.10 (Ubuntu)
X-Powered-By: PHP/7.0.10-1+deb.sury.org~jessie
X-Content-Type-Options: nosniff
X-Frame-Options: SAMEORIGIN
X-XSS-Protection: 1; mode=block
Set-Cookie: token=eyJhbGciOiJIUzI1NiJ9.eyJzdWIiOiIxMjM0NTY3ODkwIiwibmFtZSI6IkJpbmFkIiwic2lnbmF0dXJlIjoiZW52aW9yIiwidXNlcm5hbWUiOiJsb2dpbiIsImV4cCI6MTUxOTQwOTUwMSwiaWF0IjoxNTE5MDUwOTUwLCJpYXQiOjE1MTUwNDUwOTV9; expires=Mon, 27 Mar 2017 11:48:21 GMT; path=/; secure; HttpOnly
DELETE /borrower/1
HTTP/1.1 200 OK
Content-Type: application/json; charset=utf-8
Content-Length: 147
Date: Mon, 27 Mar 2017 11:48:21 GMT
Server: Apache/2.4.10 (Ubuntu)
X-Powered-By: PHP/7.0.10-1+deb.sury.org~jessie
X-Content-Type-Options: nosniff
X-Frame-Options: SAMEORIGIN
X-XSS-Protection: 1; mode=block
Set-Cookie: token=eyJhbGciOiJIUzI1NiJ9.eyJzdWIiOiIxMjM0NTY3ODkwIiwibmFtZSI6IkJpbmFkIiwic2lnbmF0dXJlIjoiZW52aW9yIiwidXNlcm5hbWUiOiJsb2dpbiIsImV4cCI6MTUxOTQwOTUwMSwiaWF0IjoxNTE5MDUwOTUwLCJpYXQiOjE1MTUwNDUwOTV9; expires=Mon, 27 Mar 2017 11:48:21 GMT; path=/; secure; HttpOnly

Status check GET:

```
GET /borrower
Content-Type: application/json
{
  "Bearer token": "eyJhbGciOiJIUzI1NiJ9.eyJzdWIiOiIxMjM0NTY3ODkwIiwibmFtZSI6IkJpbmFkIiwic2lnbmF0dXJlIjoiZW52aW9yIiwidXNlcm5hbWUiOiJsb2dpbiIsImV4cCI6MTUxOTQwOTUwMSwiaWF0IjoxNTE5MDUwOTUwLCJpYXQiOjE1MTUwNDUwOTV9"
}
```

Status 200 OK Time: 5 ms Size: 409 B
[{"id_borrower":1,"fname":"Tonttu","lname":"Tomera","streetAddress":"Pajakylä 3"}, {"id_borrower":2,"fname":"Joulu","lname":"Vihreä","streetAddress":"Kielekatu 1"}, {"id_borrower":3,"fname":"Lasse","lname":"Lainaja","streetAddress":"Korvatunturi"}]