

MySQL: ssä loin tietokannan, käyttäjän, taulukot ja lisäsin taulukoihin kaksi tietuetta

```
mysql> CREATE DATABASE netdb;
Query OK, 1 row affected (0.02 sec)

mysql> CREATE USER 'netuser'@'localhost' IDENTIFIED BY 'netpass';
Query OK, 0 rows affected (0.02 sec)

mysql> GRANT ALL on netdb.* to 'netuser'@'localhost';
Query OK, 0 rows affected (0.01 sec)

mysql> USE netdb;
Database changed

mysql> CREATE TABLE book(
  -> id_book INT NOT NULL PRIMARY KEY AUTO_INCREMENT,
  -> name VARCHAR(255),
  -> autor VARCHAR(255),
  -> isbn VARCHAR(20));
Query OK, 0 rows affected (0.15 sec)

mysql> CREATE TABLE borrower(
  -> id_borrower INT NOT NULL PRIMARY KEY AUTO_INCREMENT,
  -> fname VARCHAR(40),
  -> lname VARCHAR(40),
  -> streetAddress VARCHAR(50));
Query OK, 0 rows affected (0.05 sec)

mysql> desc book;
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra          |
+-----+-----+-----+-----+-----+-----+
| id_book | int           | NO   | PRI | NULL    | auto_increment |
| name   | varchar(255)  | YES  |     | NULL    |                |
| autor  | varchar(255)  | YES  |     | NULL    |                |
| isbn   | varchar(20)   | YES  |     | NULL    |                |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.06 sec)

mysql> desc borrower;
+-----+-----+-----+-----+-----+-----+
| Field          | Type          | Null | Key | Default | Extra          |
+-----+-----+-----+-----+-----+-----+
| id_borrower    | int           | NO   | PRI | NULL    | auto_increment |
| fname          | varchar(40)   | YES  |     | NULL    |                |
| lname          | varchar(40)   | YES  |     | NULL    |                |
| streetAddress  | varchar(50)   | YES  |     | NULL    |                |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.01 sec)

mysql> ALTER TABLE book CHANGE COLUMN autor author VARCHAR(255);
Query OK, 0 rows affected (0.10 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> INSERT INTO book(name,author,isbn) VALUES('PHP Basic','Bob Jones','123-456-789-111-x');
Query OK, 1 row affected (0.02 sec)

mysql> INSERT INTO book(name,author,isbn) VALUES('Statistics','Lisa Smith','222-333-444-555-y');
Query OK, 1 row affected (0.01 sec)
```

VS Code:ssa loin database.js, book.js, book_model.js, borrower.js, borrower_model.js, muokattu app.js

book-tilun CRUD-operaatiot

Create

The image shows a VS Code editor window on the left and a web browser window on the right. The VS Code window displays a REST client interface with a POST request to `http://localhost:3000/book`. The request body is a JSON object: `{ "name": "Muumit ja taikatalvi", "author": "Tove Jansson", "isbn": "123-456-789" }`. The response is a 200 OK status with a JSON body: `{ "fieldCount": 0, "affectedRows": 1, "insertId": 4, "info": "", "serverStatus": 2, "warningStatus": 0, "changedRows": 0 }`. The web browser window on the right shows the response from `localhost:3000/book`, which is a JSON array of two book objects: `[{"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"}]`.

Read

Postman interface showing a GET request to `http://localhost:3000/book/2`. The response is a 200 OK status with a JSON body:

```
1 [
2   {
3     "id_book": 2,
4     "name": "Statistics",
5     "author": "Lisa Smith",
6     "isbn": "222-333-444-555-y"
7   }
8 ]
```

Web browser showing the response of the GET request to `localhost:3000/book/2`. The response is a JSON object:

```
{
  "id_book": 2,
  "name": "Statistics",
  "author": "Lisa Smith",
  "isbn": "222-333-444-555-y"
}
```

Update

Postman interface showing a PUT request to `http://localhost:3000/book/4`. The response is a 200 OK status with a JSON body:

```
1 {
2   "name": "Muumit",
3   "author": "Tove Jansson",
4   "isbn": "123-456-78901"
5 }
```

Body: Cookies Headers (7) Test Results

```
1 {
2   "fieldCount": 0,
3   "affectedRows": 1,
4   "insertId": 0,
5   "info": "Rows matched: 1 Changed: 1 Warnings: 0",
6   "serverStatus": 2,
7   "warningStatus": 0,
8   "changedRows": 1
9 }
```

Web browser showing the response of the PUT request to `localhost:3000/book/4`. The response is a JSON object:

```
{
  "id_book": 4,
  "name": "Muumit",
  "author": "Tove Jansson",
  "isbn": "123-456-78901"
}
```

Delete

Postman interface showing a DELETE request to `http://localhost:3000/book/4`. The response is a 200 OK status with a JSON body:

```
1 {
2   "fieldCount": 0,
3   "affectedRows": 1,
4   "insertId": 0,
5   "info": " ",
6   "serverStatus": 2,
7   "warningStatus": 0,
8   "changedRows": 0
9 }
```

Web browser showing the response of the DELETE request to `localhost:3000/book`. The response is a JSON array:

```
[
  {
    "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"
  }
]
```

borrower-taulun CRUD-operaatiot

Create

HTTP **POST** http://localhost:3000/borrower

Params Authorization Headers (9) **Body**

☐ none ☐ form-data ☐ x-www-form-urlencoded

```
1 {
2   "fname": "Alena",
3   "lname": "Abaseva",
4   "streetAddress": "Ouluntie1"
5 }
```

Body Cookies Headers (7) Test Results

{} JSON Preview Visualize

```
1 {
2   "fieldCount": 0,
3   "affectedRows": 1,
4   "insertId": 1,
5   "info": "",
6   "serverStatus": 2,
7   "warningStatus": 0,
8   "changedRows": 0
9 }
```

Read

GET http://localhost:3000/borrower/2

Params Authorization Headers (7) **Body**

☐ none ☐ form-data ☐ x-www-form-urlencoded

```
1
```

Body Cookies Headers (7) Test Results

{} JSON Preview Visualize

```
1 [
2   {
3     "id_borrower": 2,
4     "fname": "Elina",
5     "lname": "Puitti",
6     "streetAddress": "Ouluntie2"
7   }
8 ]
```

Update

HTTP **PUT** http://localhost:3000/borrower/2

Params Authorization Headers (9) **Body**

☐ none ☐ form-data ☐ x-www-form-urlencoded

```
1 {
2   "fname": "Alina",
3   "lname": "Puitti",
4   "streetAddress": "Ouluntie4"
5 }
```

Body Cookies Headers (7) Test Results

{} JSON Preview Visualize

```
1 {
2   "fieldCount": 0,
3   "affectedRows": 1,
4   "insertId": 0,
5   "info": "Rows matched: 1 Changed:",
6   "serverStatus": 2,
7   "warningStatus": 0,
8   "changedRows": 1
9 }
```

Delete

HTTP **DELETE** http://localhost:3000/borrower/1

Params Authorization Headers (7) **Body**

☐ none ☐ form-data ☐ x-www-form-urlencoded

```
1
```

Body Cookies Headers (7) Test Results

{} JSON Preview Visualize

```
1 {
2   "fieldCount": 0,
3   "affectedRows": 1,
4   "insertId": 0,
5   "info": "",
6   "serverStatus": 2,
7   "warningStatus": 0,
8   "changedRows": 0
9 }
```

