

# LU11c - CRUD Server and Postman

## Learning Objectives

1. How to connect the server to the db
2. How to fetch data from the db and display it in POSTMAN
3. How to perform the CRUD operations on the server
4. How to perform the CRUD operations by using PoSTMAN

## Sources

- SampleServer that can perform CRUD

## Introduction

At last chapter of our database journey we want to perform all CRUD operations within the server AND the client (POSTMAN). For reasons of efficiency we are going to start with the R = READ of CRUD.

### R = READ: Fetching list of data

First of all, we want to display the list of users, which are store in the table users. The following code show how to get that list from the database.

```
// Method to get data from the user table
app.get('/user', (req, res) => {
  const query = 'SELECT * FROM users'; // SQL query to select all rows
  from user table
  db.query(query, (err, results) => {
    if (err) {
      console.error('Error retrieving users:', err);
      res.status(500).send('Server error');
      return;
    }
    res.json(results); // Send the results as JSON
  });
});
```

The screenshot displays a web browser on the left and a code editor on the right. In the browser, a GET request to `http://localhost:3000/user` is shown, with the 'Send' button circled in red. The response body is a JSON array of user objects, also circled in red. The code editor shows the corresponding JavaScript code for the GET endpoint, with a red circle highlighting the database query and error handling logic.

```
app.get('/data', (req, Response, ResBody, ResBody, ResQuery, LocalDB, res, Response-ResBody) => {
  db.query('SELECT NOW() AS system_date', (err, results) => {
    res.status(200).send({ body: 'Server error' });
    return;
  });
  res.send({ body: 'Current system date and time: ${results[0].system_date}' });
});

// MyThird.js get data from the user table
app.get('/user', (req, Response, ResBody, ResBody, ResQuery, LocalDB, res, Response-ResBody, LocalDB) => {
  const query = `SELECT * FROM users`; // SQL query to select all rows from user table
  db.query(query, (err, results) => {
    if (err) {
      console.error('Error retrieving users:', err);
      res.status(500).send({ body: 'Server error' });
      return;
    }
    res.json(results); // Send the results as JSON
  });
});

app.get('/user/:id', (req, Response, ResBody, ResBody, ResQuery, LocalDB, res, Response-ResBody, LocalDB) => {
  const userId = req.params.id;
  // SQL query to fetch user by id
  const query = `SELECT * FROM users WHERE user_id = ?`;
  db.query(query, [userId], (err, results) => {
    if (err) {
      console.error('Error fetching user:', err);
      res.status(500).send({ body: 'Server error' });
      return;
    }
  });
});
```



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