## Copilot

Sure! Here's a detailed guide on how to perform basic CRUD (Create, Read, Update, Delete) operations using Node.js and MySQL:

### 1. Setting Up the Environment

**Install Node.js and MySQL:**

* Ensure you have Node.js and npm installed. You can download them from [Node.js official website](https://nodejs.org/).
* Install MySQL and set up a database. You can download MySQL from [MySQL official website](https://dev.mysql.com/downloads/mysql/).

### 2. Create a New Node.js Project

**Initialize the project:**

mkdir nodejs-mysql-crud

cd nodejs-mysql-crud

npm init -y

**Install necessary packages:**

npm install express mysql body-parser

### 3. Set Up the Database

**Create a database and table:**

CREATE DATABASE nodejs\_crud;

USE nodejs\_crud;

CREATE TABLE users (

id INT AUTO\_INCREMENT PRIMARY KEY,

name VARCHAR(100),

email VARCHAR(100)

);

### 4. Create the Server

**Create a file named** server.js**:**

const express = require('express');

const mysql = require('mysql');

const bodyParser = require('body-parser');

const app = express();

app.use(bodyParser.json());

// MySQL connection

const connection = mysql.createConnection({

host: 'localhost',

user: 'root',

password: 'password',

database: 'nodejs\_crud'

});

connection.connect((err) => {

if (err) throw err;

console.log('Connected to MySQL Database.');

});

// Create

app.post('/users', (req, res) => {

const user = req.body;

const sql = 'INSERT INTO users (name, email) VALUES (?, ?)';

connection.query(sql, [user.name, user.email], (err, result) => {

if (err) throw err;

res.send('User added successfully.');

});

});

// Read

app.get('/users', (req, res) => {

const sql = 'SELECT \* FROM users';

connection.query(sql, (err, results) => {

if (err) throw err;

res.json(results);

});

});

// Update

app.put('/users/:id', (req, res) => {

const user = req.body;

const sql = 'UPDATE users SET name = ?, email = ? WHERE id = ?';

connection.query(sql, [user.name, user.email, req.params.id], (err, result) => {

if (err) throw err;

res.send('User updated successfully.');

});

});

// Delete

app.delete('/users/:id', (req, res) => {

const sql = 'DELETE FROM users WHERE id = ?';

connection.query(sql, [req.params.id], (err, result) => {

if (err) throw err;

res.send('User deleted successfully.');

});

});

app.listen(3000, () => {

console.log('Server is running on port 3000');

});

### 5. Running the Server

**Start the server:**

node server.js

### 6. Testing the API

You can use tools like Postman to test the API endpoints:

* **POST** /users to create a new user.
* **GET** /users to retrieve all users.
* **PUT** /users/:id to update a user by ID.
* **DELETE** /users/:id to delete a user by ID.

This should give you a solid foundation for performing CRUD operations with Node.js and MySQL. If you need more detailed examples or tutorials, you can check out resources like [Jason Watmore's Blog](https://jasonwatmore.com/post/2021/11/22/nodejs-mysql-crud-api-example-and-tutorial) [4] or [Shouts.dev](https://shouts.dev/articles/nodejs-simple-crud-with-expressjs-and-mysql) [5].

Feel free to ask if you have any questions or need further assistance!

Source: Conversation with Copilot, 10/08/2024

1. [Node.js + MySQL - CRUD API Example and Tutorial - Jason Watmore](https://jasonwatmore.com/post/2021/11/22/nodejs-mysql-crud-api-example-and-tutorial)
2. [Node.js Simple CRUD with Express.js and MySQL - Shouts.dev](https://shouts.dev/articles/nodejs-simple-crud-with-expressjs-and-mysql)
3. [Complete Node.js and MySQL CRUD Operations Tutorial 2021 | Build RESTful API with Node and Express](https://www.youtube.com/watch?v=Pj6_jz_R-7Q)
4. [React + Node js + MySQL - CRUD Operations | CRUD Rest API with Node and Express](https://www.youtube.com/watch?v=y5NvOade3sk)
5. [React Node.js MySQL CRUD Tutorial for Beginners](https://www.youtube.com/watch?v=fPuLnzSjPLE)
6. [Building a CRUD Application with Node.js, Express, and MySQL](https://dev.to/manthanank/building-a-crud-application-with-nodejs-express-and-mysql-4d2m)
7. [Node.js MySQL CRUD Example Tutorial - Java Guides](https://www.javaguides.net/2020/02/nodejs-mysql-crud-example-tutorial.html)
8. <https://github.com/cornflourblue/node-mysql-crud-api>
9. <https://nodejs.org/>
10. <https://dev.mysql.com/downloads/mysql/>
11. <https://dev.mysql.com/doc/refman/8.0/en/installing.html>
12. <https://code.visualstudio.com/>
13. [MySQL CRUD Tutorials in JavaScript/Node.js: A Step-by-Step Guide](https://www.sqliz.com/posts/javascript-crud-mysql/)
14. [Create a Basic CRUD API in NodeJS, ExpressJS and MySQL](https://tecadmin.net/create-a-basic-crud-api-in-nodejs-expressjs-and-mysql/)