# Department of Computing

**CS-213: Advanced Programming**

**Class: BSCS 7A**

# Lab 5: Node.js MySQL

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# Lab 5: Node.js MySQL

**Lab Tasks**

**Task 1:** Start by creating a connection to the database. Use the username and password from your MySQL database.



var mysql = require('mysql');

var con = mysql.createConnection({

host: "localhost",

user: "root",

password: "seecs@123"

});

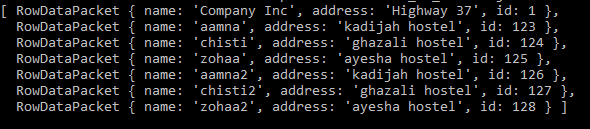
con.connect(function(err) {

if (err) throw err;

console.log("Connected!");

});

**Task 2:** Use SQL statements to read from (or write to) a MySQL database. The query method takes an sql statements as a parameter and returns the result.



var mysql = require('mysql');

var con = mysql.createConnection({

host: "localhost",

user: "root",

password: "seecs@123",

database: "mydb"

});

con.connect(function(err) {

if (err) throw err;

con.query("SELECT \* FROM customers", function (err, result, fields) {

if (err) throw err;

console.log(result);

});

});

**Task 3:** Create a database named "mydb". Save the code in a file called "demo\_create\_db.js" and run the file.



var mysql = require('mysql');

var con = mysql.createConnection({

host: "localhost",

user: "root",

password: "seecs@123"

});

con.connect(function(err) {

if (err) throw err;

console.log("Connected!");

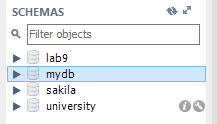
con.query("CREATE DATABASE mydb", function (err, result) {

if (err) throw err;

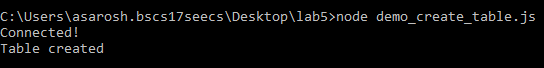
console.log("Database created");

});

});



**Task 4:** Create a table named "customers". Save the code above in a file called "demo\_create\_table.js" and run the file



var mysql = require('mysql');

var con = mysql.createConnection({

host: "localhost",

user: "root",

password: "seecs@123",

database: "mydb"

});

con.connect(function(err) {

if (err) throw err;

console.log("Connected!");

var sql = "CREATE TABLE customers (name VARCHAR(255), address VARCHAR(255))";

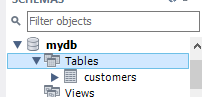
con.query(sql, function (err, result) {

if (err) throw err;

console.log("Table created");

});

});



**Task 5:** Create primary key when creating the table. If the table already exists, use the ALTER TABLE keyword.

var mysql = require('mysql');

var con = mysql.createConnection({

host: "localhost",

user: "root",

password: "seecs@123",

database: "mydb"

});

con.connect(function(err) {

if (err) throw err;

console.log("Connected!");

var sql = "ALTER TABLE customers ADD COLUMN id int PRIMARY KEY";

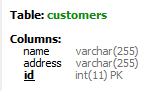
con.query(sql, function (err, result) {

if (err) throw err;

console.log("Table created");

});

});



**Task 6:** Insert a record in the "customers" table. Save the code above in a file called "demo\_db\_insert.js", and run the file.



var mysql = require('mysql');

var con = mysql.createConnection({

host: "localhost",

user: "root",

password: "seecs@123",

database: "mydb"

});

con.connect(function(err) {

if (err) throw err;

console.log("Connected!");

var sql = "INSERT INTO customers (name, address, id) VALUES ('Company Inc', 'Highway 37','1')";

con.query(sql, function (err, result) {

if (err) throw err;

console.log("1 record inserted");

});

});

**Task 7:** Fill the "customers" table with multiple data. Save the code above in a file called "demo\_db\_insert\_multple.js", and run the file. Return the number of affected rows



var mysql = require('mysql');

var con = mysql.createConnection({

host: "localhost",

user: "root",

password: "seecs@123",

database: "mydb"

});

con.connect(function(err) {

if (err) throw err;

var VALUES = [

['aamna2', 'kadijah hostel', '126'],

['chisti2', 'ghazali hostel', '127'],

['zohaa2', 'ayesha hostel', '128'],

]

console.log("Connected!");

var sql = "INSERT INTO customers VALUES ?";

con.query(sql, [VALUES],function (err, result) {

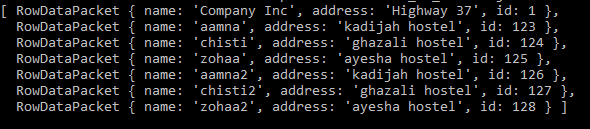
if (err) throw err;

console.log("Rows affected:"+result.affectedRows);

});

});

**Task 8:** Select all records from the "customers" table, and display the result object. Save the code above in a file called "demo\_db\_select.js" and run the file



var mysql = require('mysql');

var con = mysql.createConnection({

host: "localhost",

user: "root",

password: "seecs@123",

database: "mydb"

});

con.connect(function(err) {

if (err) throw err;

con.query("SELECT \* FROM customers", function (err, result, fields) {

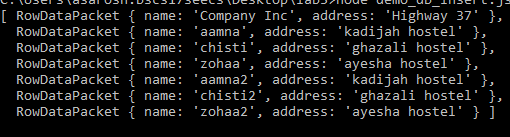
if (err) throw err;

console.log(result);

});

});

**Task 9:** Select name and address from the "customers" table, and display the return object. Save the code above in a file called "demo\_db\_select2.js" and run the file



var mysql = require('mysql');

var con = mysql.createConnection({

host: "localhost",

user: "root",

password: "seecs@123",

database: "mydb"

});

con.connect(function(err) {

if (err) throw err;

con.query("SELECT name, address FROM customers", function (err, result, fields) {

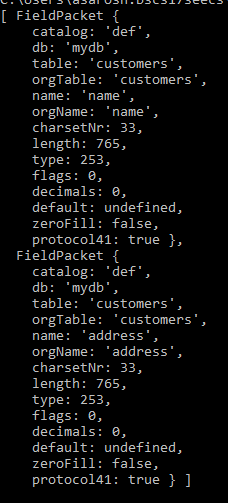
if (err) throw err;

console.log(result);

});

});

**Task 10:** Select all records from the "customers" table, and display the fields object. Save the code above in a file called "demo\_db\_select\_fields.js" and run the file



var mysql = require('mysql');

var con = mysql.createConnection({

host: "localhost",

user: "root",

password: "seecs@123",

database: "mydb"

});

con.connect(function(err) {

if (err) throw err;

con.query("SELECT name, address FROM customers", function (err, result, fields) {

if (err) throw err;

console.log(fields);

});

});

**Task11:** Select record(s) with the address "ayesha hostel". Save the code above in a file called "demo\_db\_where.js" and run the file



var mysql = require('mysql');

var con = mysql.createConnection({

host: "localhost",

user: "root",

password: "seecs@123",

database: "mydb"

});

con.connect(function(err) {

if (err) throw err;

con.query("SELECT \* FROM customers WHERE address = 'ayesha hostel'", function (err, result) {

if (err) throw err;

console.log(result);

});

});

**Task 12:** Select records where the address starts with the letter 'g'. Save the code above in a file called "demo\_db\_where\_s.js" and run the file.



var mysql = require('mysql');

var con = mysql.createConnection({

host: "localhost",

user: "root",

password: "seecs@123",

database: "mydb"

});

con.connect(function(err) {

if (err) throw err;

con.query("SELECT \* FROM customers WHERE address LIKE 'g%'", function (err, result) {

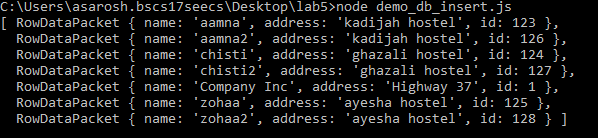
if (err) throw err;

console.log(result);

});

});

**Task 13:** Sort the result alphabetically by name. Save the code above in a file called "demo\_db\_orderby.js" and run the file



var mysql = require('mysql');

var con = mysql.createConnection({

host: "localhost",

user: "root",

password: "seecs@123",

database: "mydb"

});

con.connect(function(err) {

if (err) throw err;

con.query("SELECT \* FROM customers ORDER BY name", function (err, result) {

if (err) throw err;

console.log(result);

});

});

**Task 14:** Delete any record with the address "Ayesha hostel". Save the code above in a file called "demo\_db\_delete.js" and run the file.



var mysql = require('mysql');

var con = mysql.createConnection({

host: "localhost",

user: "root",

password: "seecs@123",

database: "mydb"

});

con.connect(function(err) {

if (err) throw err;

var sql = "DELETE FROM customers WHERE address = 'ayesha hostel'";

con.query(sql, function (err, result) {

if (err) throw err;

console.log("Number of records deleted: " + result.affectedRows);

});

});

**Task 15:** Delete the table "customers". Save the code above in a file called "demo\_db\_drop\_table\_if.js" and run the file.

**Task 16:** Overwrite the address column from "Valley 345" to "Canyon 123". Save the code above in a file called "demo\_db\_update.js" and run the file

var mysql = require('mysql');

var con = mysql.createConnection({

host: "localhost",

user: "root",

password: "seecs@123",

database: "mydb"

});

con.connect(function(err) {

if (err) throw err;

var sql = "UPDATE customers SET address = 'Canyon 123' WHERE address = 'Valley 345'";

con.query(sql, function (err, result) {

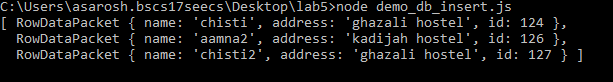
if (err) throw err;

console.log(result.affectedRows + " record(s) updated");

});

});

**Task 17:** Select the 5 first records in the "customers" table. Save the code above in a file called "demo\_db\_limit.js" and run the file. Now Start from position 3, and return the next 5 records.



var mysql = require('mysql');

var con = mysql.createConnection({

host: "localhost",

user: "root",

password: "seecs@123",

database: "mydb"

});

con.connect(function(err) {

if (err) throw err;

var sql = "SELECT \* FROM customers LIMIT 5 OFFSET 2";

con.query(sql, function (err, result) {

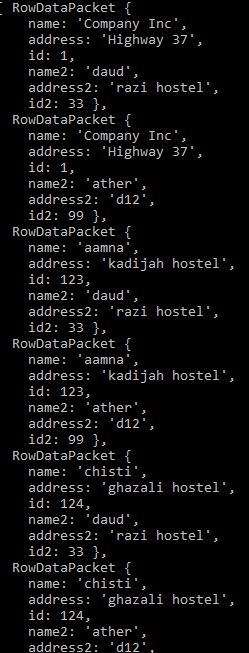
if (err) throw err;

console.log(result);

});

});

**Task 18:** Practice the Join operations on different tables.



var mysql = require('mysql');

var con = mysql.createConnection({

host: "localhost",

user: "root",

password: "seecs@123",

database: "mydb"

});

con.connect(function(err) {

if (err) throw err;

var sql = "SELECT \* FROM customers JOIN customer2";

con.query(sql, function (err, result) {

if (err) throw err;

console.log(result);

});

});