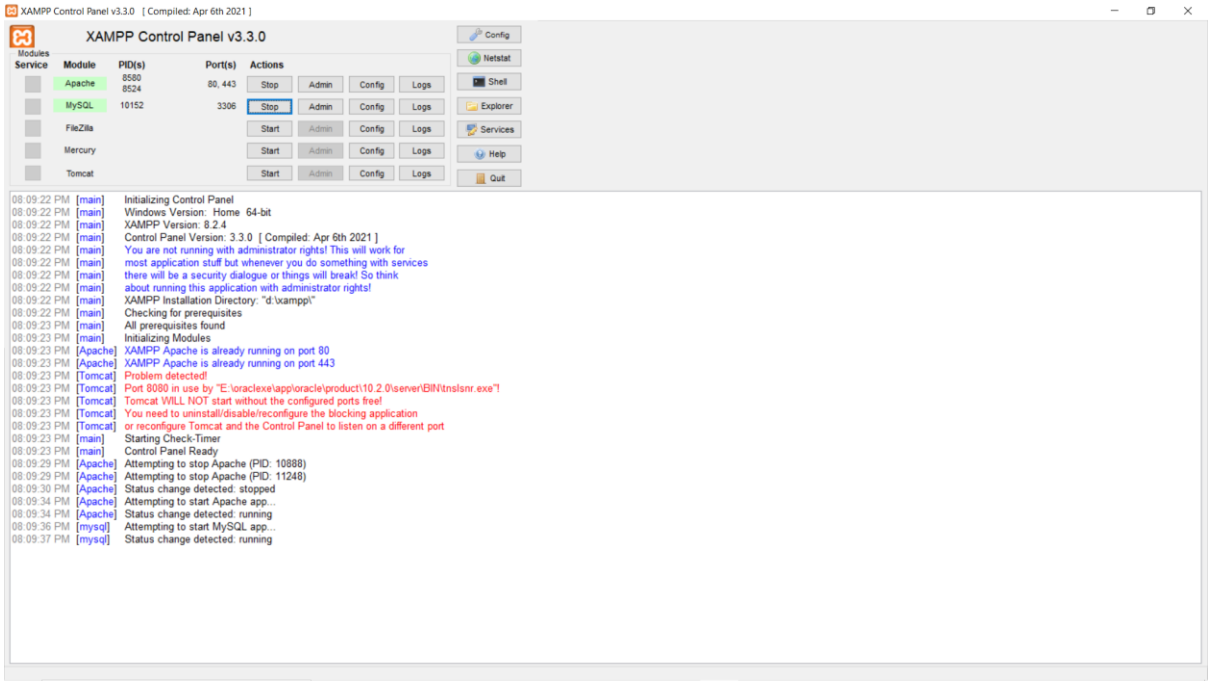
11. Handling SQL Databases from NodeJS

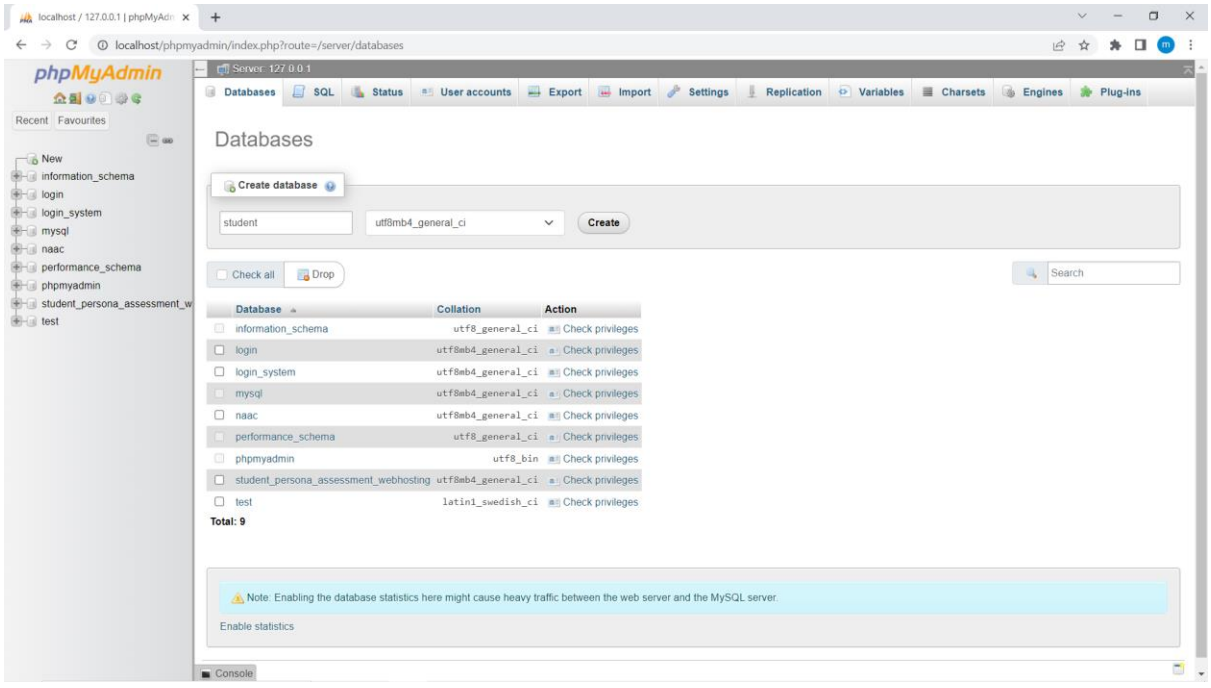
Procedure:

Step 1: Create Database

Open XAMPP Control Panel and start Apache and MySQL.



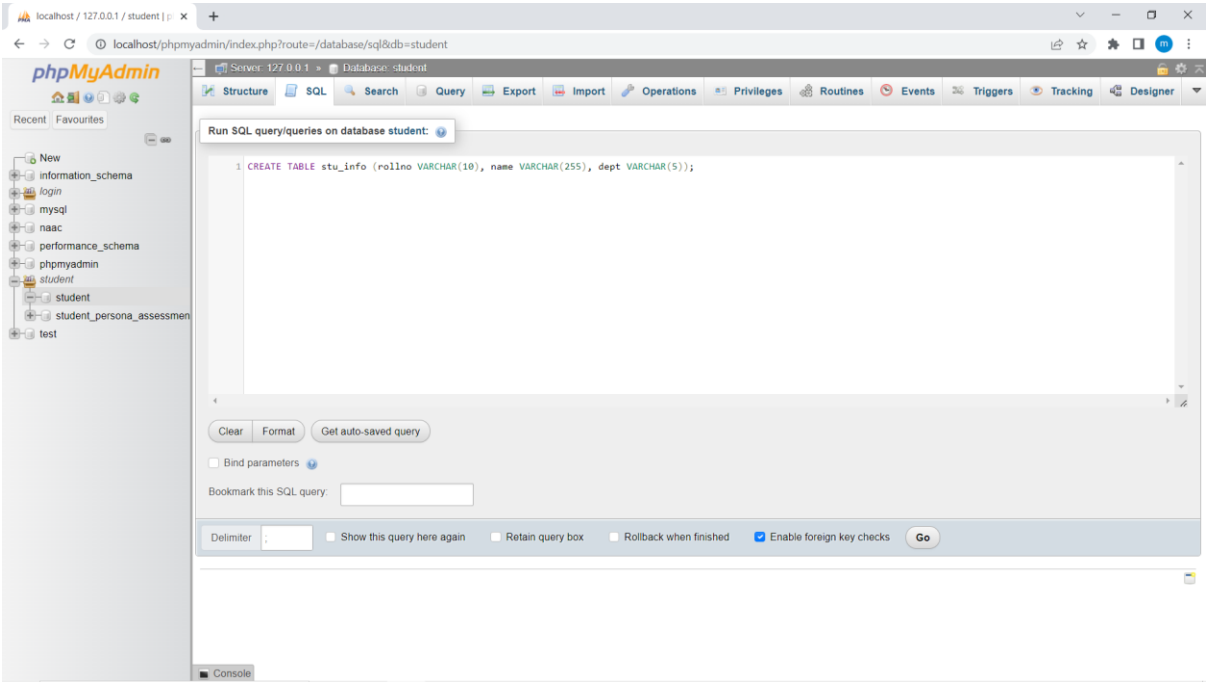
Then Click Admin corresponding to the MySQL Module.



Step 2: Create Table

Type the following query in SQL tab to create MySQL table.

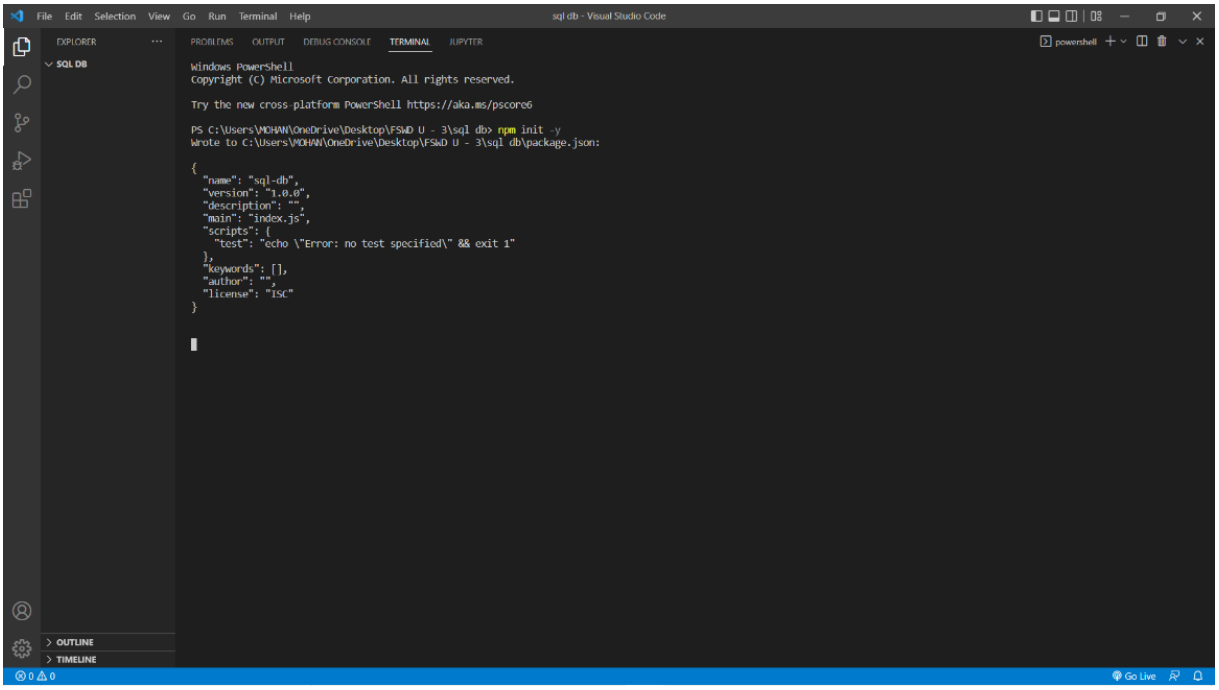
CREATE TABLE stu_info (rollno VARCHAR(10), name VARCHAR(255), dept VARCHAR(5));



Step 3: Setup Project

Create new folder and open in visual studio code, then create NodeJS Project by typing the following command in terminal.

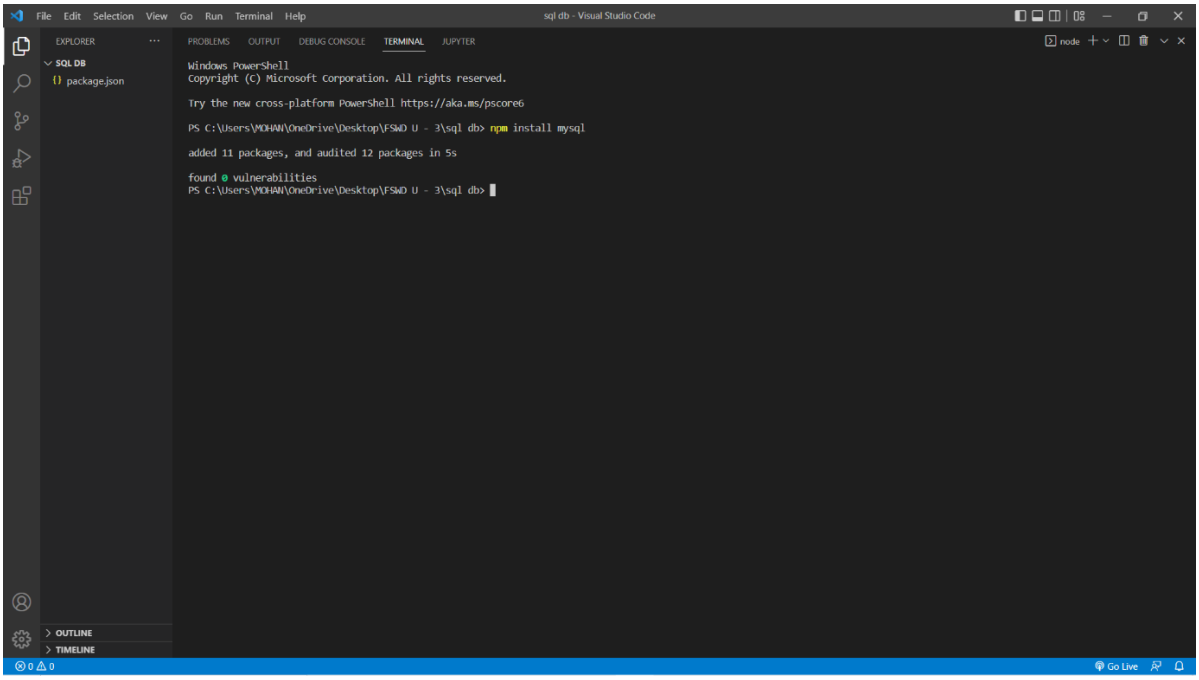
npm init -y



Step 4: Download MySQL Driver

To access a MySQL database with Node.js, you need a MySQL driver. To download and install the "mysql" module, open the Command Terminal and execute the following command.

npm install mysql



Step 5: Insert Data

Create new file named as insert.js and type the following code to insert data in MySQL Database.

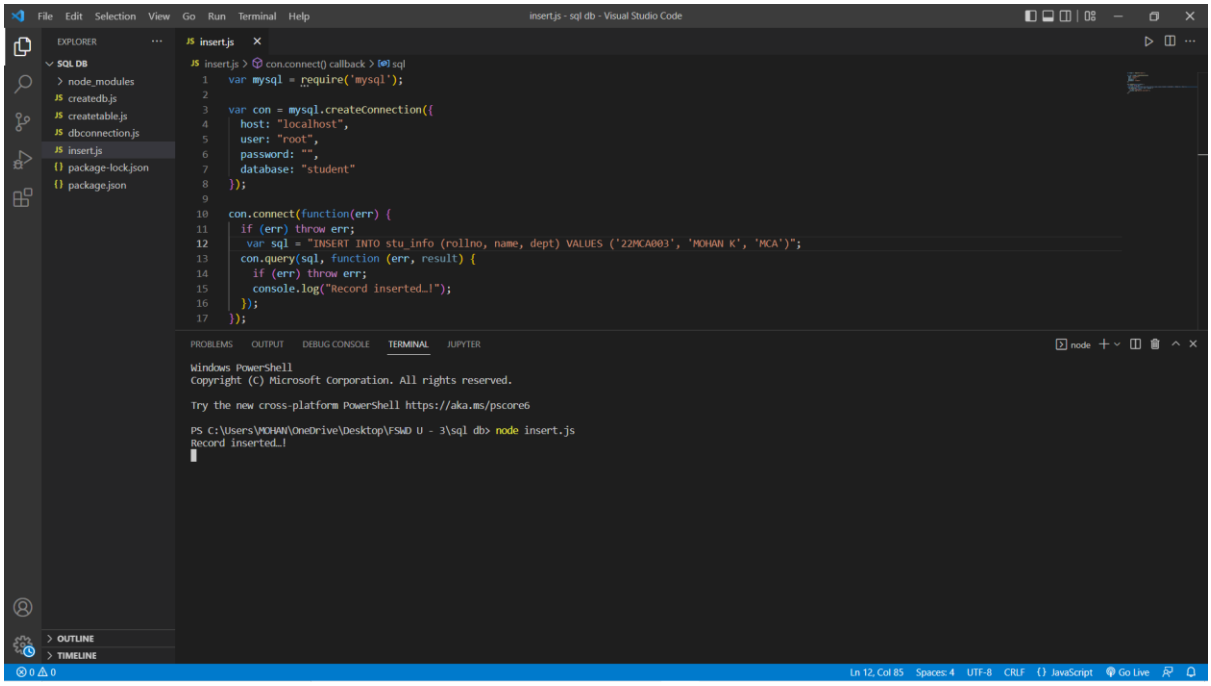
```
var mysql = require('mysql');

var con = mysql.createConnection({
  host: "localhost",
  user: "root",
  password: "",
  database: "student"
});

con.connect(function(err) {
  if (err) throw err;
   var sql = "INSERT INTO stu_info (rollno, name, dept) VALUES
('22MCA002', 'AJAY V', 'MCA')";
  con.query(sql, function (err, result) {
    if (err) throw err;
    console.log("Record inserted…!");
```

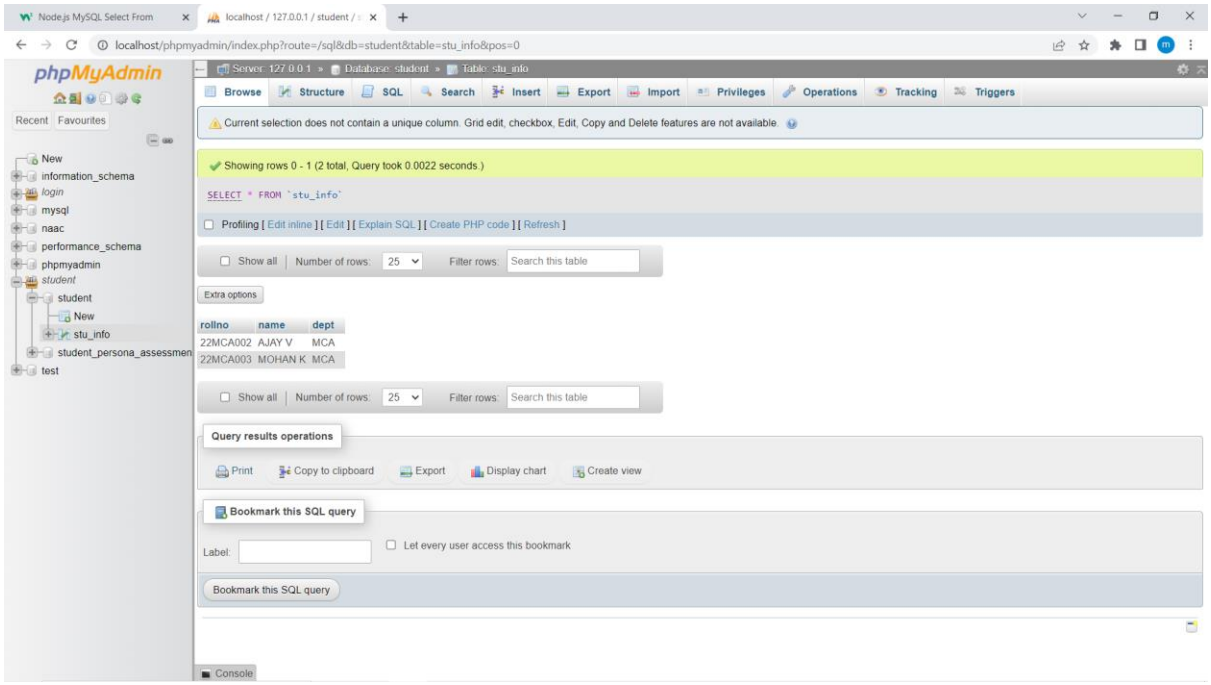
```
    });
});
```

Type the following command in terminal to run the code.

node insert.js

Output:





Step 6: Retrieve data

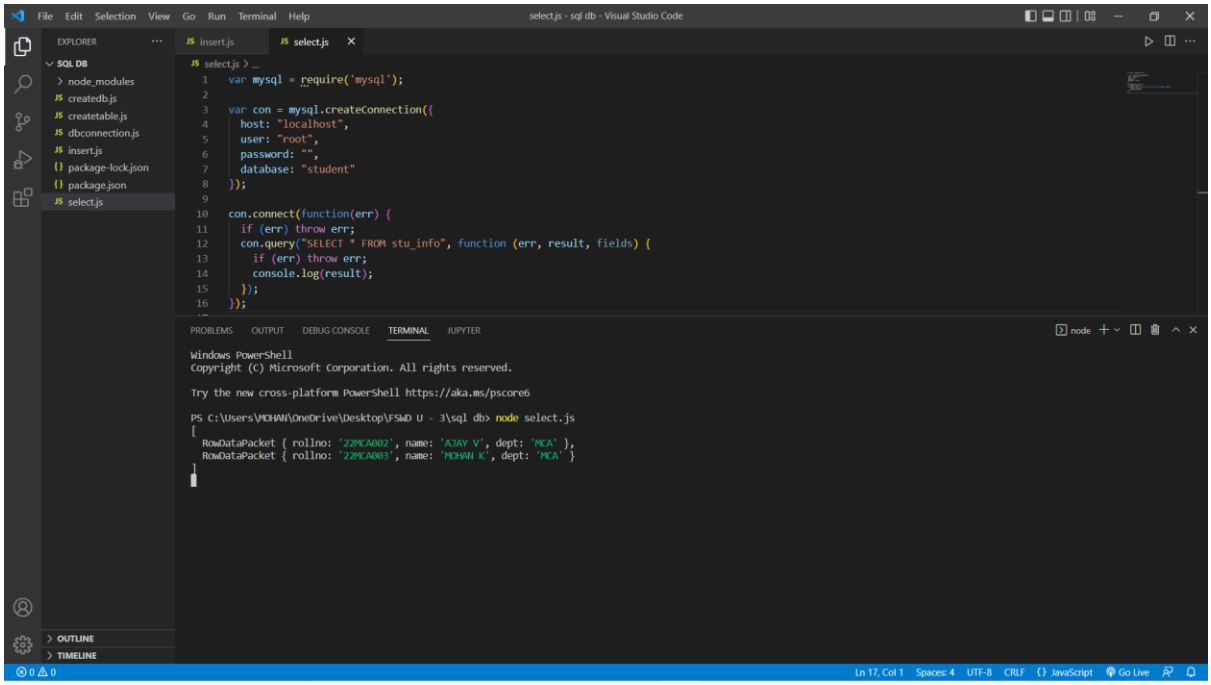
Create new file named as find.js and type the following code to retrieve data from MySQL Database.

```
var mysql = require('mysql');

var con = mysql.createConnection({
  host: "localhost",
  user: "root",
  password: "",
  database: "student"
});

con.connect(function(err) {
  if (err) throw err;
  con.query("SELECT * FROM stu_info", function (err, result,
fields) {
    if (err) throw err;
    console.log(result);
  });
});
```

Type the following command in terminal to run the code.

node find.js

Output:



[

RowDataPacket { rollno: '22MCA002', name: 'AJAY V', dept: 'MCA' },

RowDataPacket { rollno: '22MCA003', name: 'MOHAN K', dept: 'MCA' }

]

Step 7: Update Data

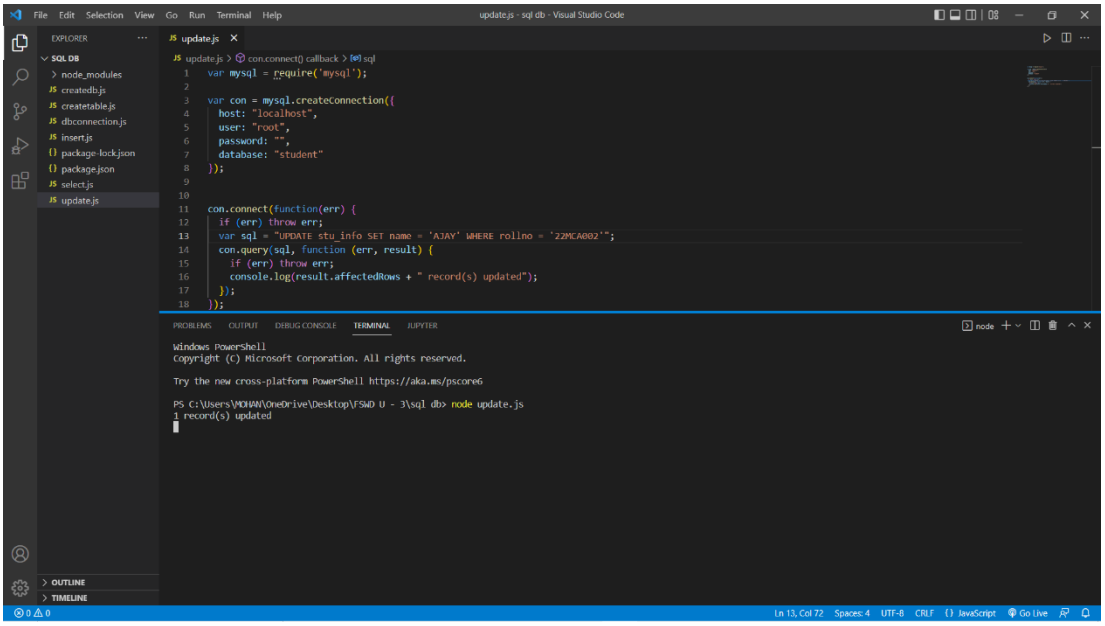
Create new file named as update.js and type the following code to update data in MySQL Database.

```
var mysql = require('mysql');

var con = mysql.createConnection({
  host: "localhost",
  user: "root",
  password: "",
  database: "student"
});


con.connect(function(err) {
  if (err) throw err;
  var sql = "UPDATE stu_info SET name = 'AJAY' WHERE rollno =
'22MCA002'";
  con.query(sql, function (err, result) {
    if (err) throw err;
    console.log(result.affectedRows + " record(s) updated");
  });
});
```

Type the following command in terminal to run the code.

node update.js

Output:



Step 8: Delete Data

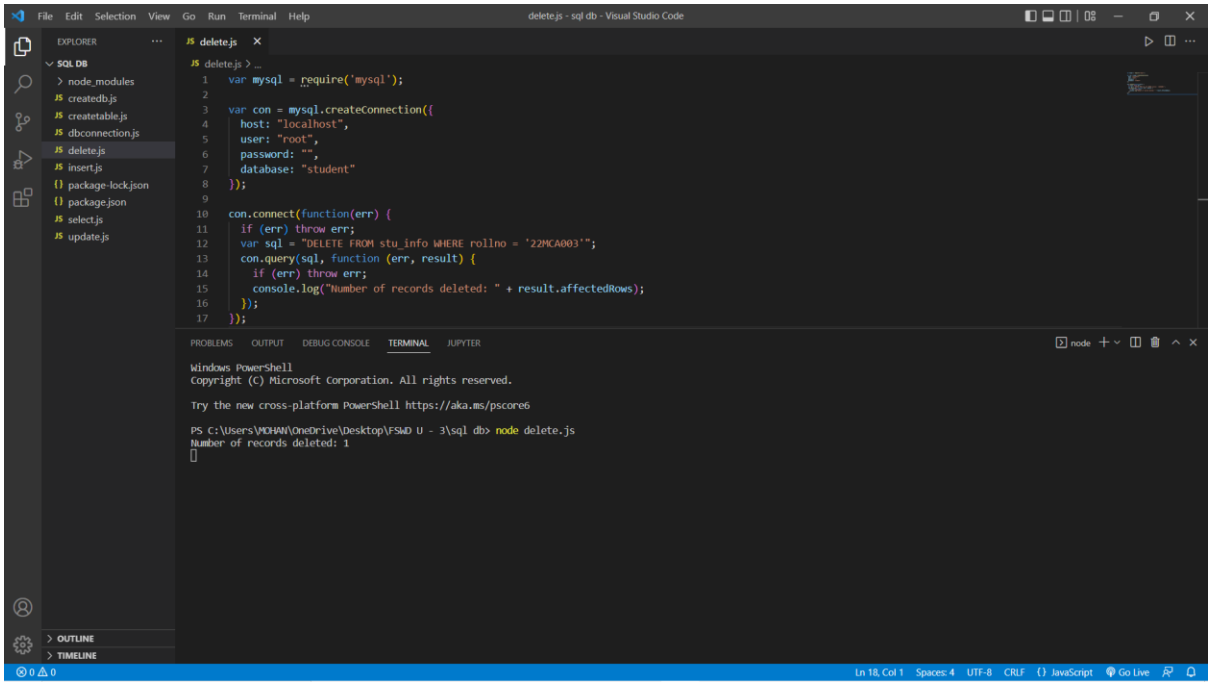
Create new file named as delete.js and type the following code to delete data in MySQL Database.

```
var mysql = require('mysql');

var con = mysql.createConnection({
  host: "localhost",
  user: "root",
  password: "",
  database: "student"
});

con.connect(function(err) {
  if (err) throw err;
  var sql = "DELETE FROM stu_info WHERE rollno = '22MCA003'";
  con.query(sql, function (err, result) {
    if (err) throw err;
    console.log("Number of records deleted: " +
result.affectedRows);
  });
});
```

Type the following command in terminal to run the code.

node delete.js

Output:


File Edit Selection View Go Run Terminal Help
delete.js - sql db - Visual Studio Code
EXPLORER
SQL DB
node_modules
createdb.js
createtable.js
dbconnection.js
delete.js
insert.js
package-lock.json
package.json
select.js
update.js
delete.js
var mysql = require('mysql');
var con = mysql.createConnection({
host: "localhost",
user: "root",
password: "",
database: "student"
});
con.connect(function(err) {
if (err) throw err;
var sql = "DELETE FROM stu_info WHERE rollno = '22MCA003'";
con.query(sql, function (err, result) {
if (err) throw err;
console.log("Number of records deleted: " + result.affectedRows);
});
});
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL JUPYTER
node
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.
Try the new cross-platform PowerShell https://aka.ms/pscore6
PS C:\Users\MOHAN\OneDrive\Desktop\FSWD U - 3\sql db> node delete.js
Number of records deleted: 1
OUTLINE
TIMELINE
Ln 18, Col 1 Spaces: 4 UTF-8 CRLF JavaScript Go Live