Install MySQL on Ubuntu

Run the following commands to install MySQL on Ubuntu

**sudo apt-get update**

**sudo apt-get install mysql-server**

After installation is complete, the mysql\_secure\_installation utility runs, which prompts for the mysql root password and other security stuff

Start the service

**sudo systemctl start mysql**

Confirm that the service is running

**sudo service mysql status**

To launch the shell

**/usr/bin/mysql -u root –p**

Note: do not enter the password after the –p, leave it blank,

The system will ask for password on the next line, see arrow

 Confirm in shell by verifying that the **mysql >** prompt is present

Create a database

**CREATE DATABASE Weights;**

To see the db just created

**SHOW DATABASES;**

Create a new user if necessary

**CREATE USER 'axle'@'localhost' IDENTIFIED BY ‘1234’;**

**GRANT ALL PRIVILEGES ON \*.\* TO 'axle'@'localhost' IDENTIFIED BY '1234';**

[This is an alternative**: GRANT ALL PRIVILEGES ON \*.\* TO 'axle'@'localhost' IDENTIFIED BY 'axle';]**

**FLUSH PRIVILEGES;**

 Check if user is in the database

**SELECT user FROM mysql.user;**

Give admin rights

**GRANT ALL PRIVILEGES ON Weights.\* to axle@localhost;**   
**FLUSH PRIVILEGES;**

 Exit the mysql shell and log in as the new user created (\q)

**/usr/bin/mysql -u axle –p**

Working with databases and tables (10)

Change the database to weights2 and create a new table using the following code:

**use weights;**

**CREATE TABLE EmployeeWeights (**

**id INT(4) UNSIGNED AUTO\_INCREMENT PRIMARY KEY,**

**empName VARCHAR(30) NOT NULL,**

**weight FLOAT(5, 1) NOT NULL,**

**email VARCHAR(50),**

**reg\_date TIMESTAMP**

**);**

Verify that the table exist

**show tables;**

verify that the columns match what was entered

**SHOW COLUMNS FROM EmployeeWeights ;**

After looking at it we realize that weight should be float 4, 1 instead.

Alter one of the columns

**ALTER TABLE EmployeeWeights  MODIFY empWeight FLOAT(4,1);**

(changing from 5,1)

Verify change:

**SHOW COLUMNS FROM EmployeeWeights ;**

Test the database and table

**INSERT INTO EmployeeWeights  (empName, empWeight) VALUES ('Axle', 55.8);**

Then Select all from table

This ends the pure MySQL part, the next part has to do with configuring MySQL to work with nodejs

Create a folder in which to work and CD into that folder

Run **npm install** within that folder to create a package.json file

Install the mysql driver for node js

**npm install express mysql**

create a server file inside the folder eg *http\_server.js*

enter the connection code below:

**let mysql = require('mysql');**

**let connection = mysql.createConnection({**

**host: 'localhost',**

**user: 'axle',**

**password: '1234',**

**database: 'weights2'**

**});**

In the next line, attempt to connect to the database (the mysql service must be running)

**connection.connect(function(err) {**

**if (err) {**

**return console.error('error: ' + err.message);**

**}**

**console.log(‘Connection ended’);**

**});**

The following function will retrieve records

**connection.connect(function(err) {**

**if (err) throw err;**

**if(connection.query("SELECT \* FROM employeeweights", function (err, result) {**

**if (err) throw err;**

**console.log(result);**

**})**

**); else console.log(result);**

**});**

The following function will insert a record

**connection.connect(function(err) {**

**if (err) {**

**return console.error('error: ' + err.message);**

**}**

**let sql = `INSERT INTO employeeweights(empName, weight) VALUES(  'Sally', 9.9 )`;**

**if(connection.query(sql)){**

**connection.end();**

**}**

**});**