

Lab 7: MySQL & NodeJs

1. Setup programming tools

1.1 Install Visual Studio Code

Stable Version 1.43.1 for windows and darwin stable for mac from <https://code.visualstudio.com/download> based on your operating system.

1.2 Install Node.js

Latest LTS Version 12.16.1 from <https://nodejs.org/en/download/> based on your operating system. (npm was included when installing Node.js)

1.3 If Node.js is installed successfully, the result would look like this:

(for macOS, launch “Terminal” using Spotlight search or through **Applications → Utilities → Terminal**

```
D:\>node -v
v12.16.1

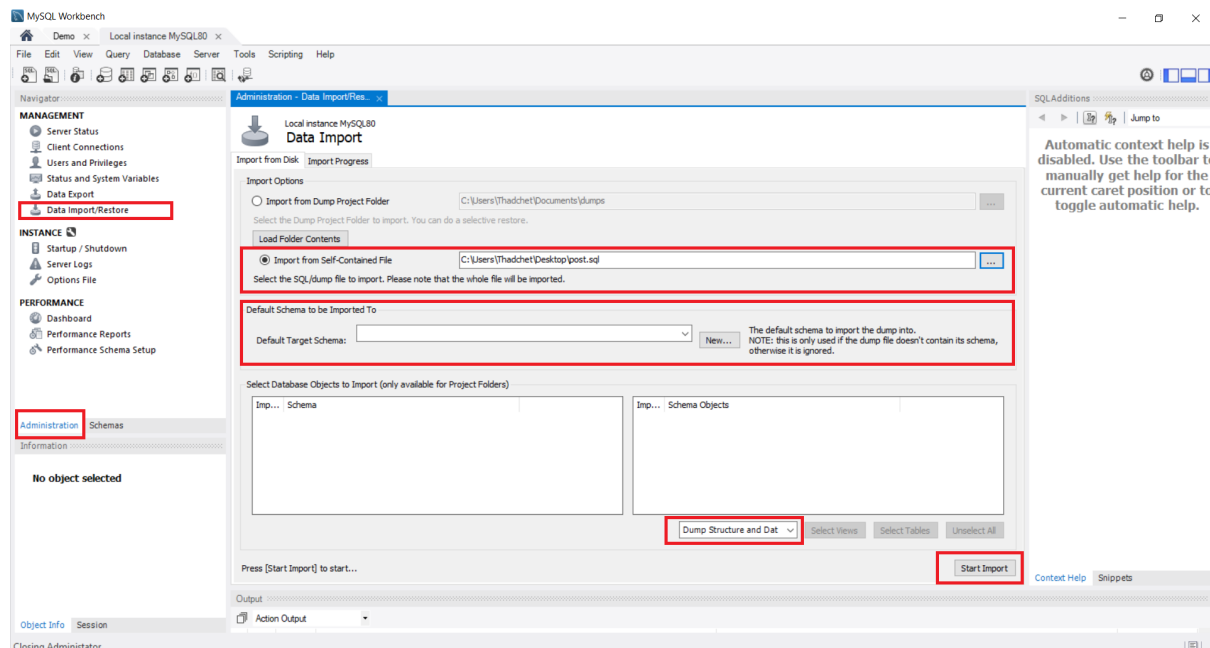
D:\>npm -v
6.13.4
```

1.4 Download Lab 7 files from myCourseVille. Extract and rename the folder to **603zzzzz21_lab7** (replace zzzzz with your student ID), then with the given source code files and Visual Studio Code, follow the instruction accordingly (see step No. 3).

2. Import the given Database to MySQLWorkbench

Import the database with the sql script file named **registration_db.sql** as follows:

- 1) Select “Administration” tab.
- 2) Select “Data Import/Restore” under Management section.
- 3) Select “Import from Self-Contained File” and browse for the .sql file.
- 4) At “Default Target Schema”, click “New” button to create a new database.
- 5) Select “Dump Structure and Data” option.
- 6) Click “Start Import” button.

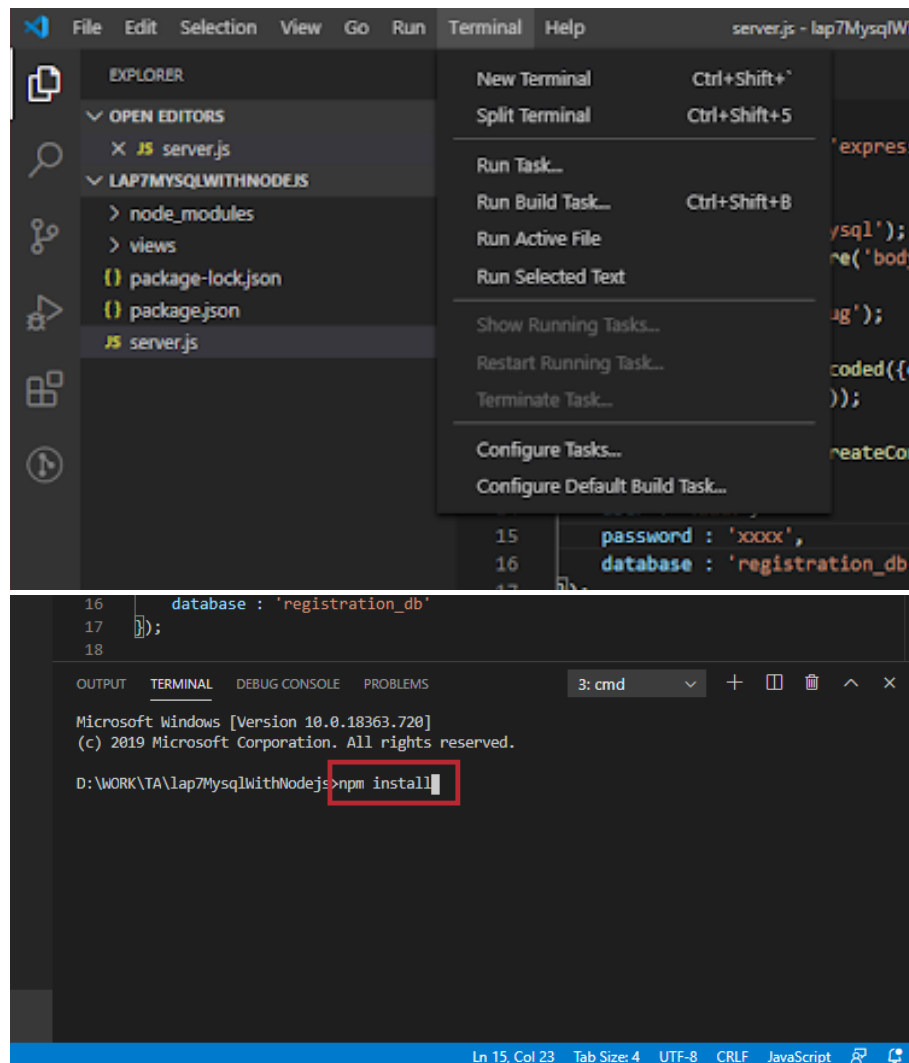


3. Web implementation

3.1 Open “server.js” in an editor, reconfigure the username and password according to your own database configuration.

```
var connection = mysql.createConnection({  
  host : 'localhost',  
  user : 'xxxx',  
  password : 'xxxx',  
  database : 'registration_db'  
});
```

3.2 Click “Terminal” tab and Select “New Terminal” then install necessary libraries by typing “npm install”.



3.3 Start a web server using “npm start” command in the terminal of Visual Studio Code. Then open the web browser with URL <http://localhost:3000/>

```
OUTPUT  TERMINAL  DEBUG CONSOLE  PROBLEMS

Microsoft Windows [Version 10.0.18363.720]
(c) 2019 Microsoft Corporation. All rights reserved.

D:\WORK\TA\lap7MysqlWithNodejs>npm start

> demo@1.0.0 start D:\WORK\TA\lap7MysqlWithNodejs
> node server.js

Example app listening on port 3000!
Connected!
```

The results should look like this.

The screenshot shows a web browser window with the address bar set to `localhost:3000`. The page title is "Lab 7: MySQL & Node.js". The page content includes a blue button labeled "Add New Student", a search bar with the placeholder text "SEARCH", and a table of student data. The table has columns for student ID, name, year, email, edit, and delete. The data rows show six students: Zinnia, Tulip, Rose, Orchid, Lotus, and Jasmine.

student_id	Name	Year	Email	Edit	Delete
55489317	Zinnia	3	55489317@student.chula.ac.th	Edit	Delete
55748896	Tulip	3	55748896@student.chula.ac.th	Edit	Delete
56717931	Rose	2	56717931@student.chula.ac.th	Edit	Delete
56756421	Orchid	2	56756421@student.chula.ac.th	Edit	Delete
57712358	Lotus	1	57712358@student.chula.ac.th	Edit	Delete
57723547	Jasmine	1	57723547@student.chula.ac.th	Edit	Delete

3.4 List of data

student_id	Name	Year	Email
55489317	Zinnia	3	55489317@student.chula.ac.th
55748896	Tulip	3	55748896@student.chula.ac.th
56717931	Rose	2	56717931@student.chula.ac.th
56756421	Orchid	2	56756421@student.chula.ac.th
57712358	Lotus	1	57712358@student.chula.ac.th
57723547	Jasmine	1	57723547@student.chula.ac.th

3.5 Search data from tables

Type a keyword in the text box then click search button.

Search

SEARCH

SEARCH

student_id	Name	Year	Email	Edit	Delete
55748896	Tulip	3	55748896@student.chula.ac.th	Edit	Delete
57712358	Lotus	1	57712358@student.chula.ac.th	Edit	Delete
57723547	Jasmine	1	57723547@student.chula.ac.th	Edit	Delete

3.6 Insert a data record >> Click “Add New Student” button.

Student_id

student_id

Name

Name

Year

Year

Email

Email

ADD

Back

Insert your information (1 record) and your friends' information (3 records).

56756421	Orchid	2	56756421@student.chula.ac.th	Edit	Delete
57712358	Lotus	1	57712358@student.chula.ac.th	Edit	Delete
57723547	Jasmine	1	57723547@student.chula.ac.th	Edit	Delete
6031025521	Namo	3	6031025521@student.chula.ac.th	Edit	Delete
6031036321	Tee	3	6031036321@student.chula.ac.th	Edit	Delete
6032036321	Lisa	3	6032036321@student.chula.ac.th	Edit	Delete
6034044421	Ben	3	6034044421@student.chula.ac.th	Edit	Delete

3.7 Edit and update data record(s) >> Click Edit button

Student_id

55489317

Name

Zinnia

Year

3

Email

55489317@student.chula.ac.th

UPDATE

Back

Change the Name to “John Wick” then click UPDATE

Student_id

55489317

Name

John wick

Year

3

Email

55489317@student.chula.ac.th

UPDATE

Back

The result:

student_id	Name	Year	Email	Edit	Delete
55489317	John wick	3	55489317@student.chula.ac.th	Edit	Delete

3.8 Delete a data record>>Click Delete button to delete one of your friend's information

6031025521	Namo	3	6031025521@student.chula.ac.th	Edit	Delete
6031036321	Tee	3	6031036321@student.chula.ac.th	Edit	Delete
6032036321	Lisa	3	6032036321@student.chula.ac.th	Edit	Delete

The results should look like this.

6031025521	Namo	3	6031025521@student.chula.ac.th	Edit	Delete
6032036321	Lisa	3	6032036321@student.chula.ac.th	Edit	Delete
6034044421	Ben	3	6034044421@student.chula.ac.th	Edit	Delete

4. Your tasks

Edit files server.js, index.pug, edit.pug, and add.pug to show, search, insert, edit, and delete the data records in the Takes table (Student ID, course id, sect_id, semester, year, and grade). Complete tasks 4.1 – 4.5, then capture all screenshots and submit them through myCourseVille.

List of screenshots:

4.1 List

Show all student enrollments.

4.2 Search

Search with the keyword "77".

4.3 Insert

Insert your enrollment information with your studentID and the following information:

CourseID: 301001

SectionID: 2

Semester: 2

Year: 2015

Grade: C

4.4 Edit

Edit student enrollment information by updating the section code from "1" to "2" of studentID 55489317.

4.5 Delete

Delete student's enrollment information of studentID 57712358.

Samples of expected screenshots:

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Add New Enrollment

Search

SEARCH

StudentID	CourseID	SectionID	Semester	Year	Grade	Edit	Delete
55489317	301001	1	2	2015	C	Edit	Delete
55748896	201002	1	2	2015	A	Edit	Delete
56717931	201001	3	summer	2015	B	Edit	Delete
56756421	201001	1	summer	2015	A	Edit	Delete
57712358	101001	1	1	2015	A	Edit	Delete
57712358	101002	2	1	2015	B	Edit	Delete
57723547	101001	1	1	2015	A	Edit	Delete
57723547	101002	1	1	2015	B+	Edit	Delete

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Add New Enrollment

Search

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SEARCH

StudentID	CourseID	SectionID	Semester	Year	Grade	Edit	Delete
56717931	201001	3	summer	2015	B	Edit	Delete
56756421	201001	1	summer	2015	A	Edit	Delete

Student_id

CourseID

SectionID

Semester

Year

Grade

ADD

Back

Student_id

CourseID

SectionID

Semester

Year

Grade

UPDATE

Back