



CS-602: Server-Side Web Development

Assignment 3

This document should not be disseminated outside the purview of its intended purpose.

General Rules for Homework Assignments

- You are strongly encouraged to add comments throughout the program. Doing so will help your instructor to understand your programming logic and grade you more accurately.
- You must work on your assignments individually. You are not allowed to copy the answers from others.
- Each assignment has a strict deadline. Assignments submitted after the deadline will carry a penalty.
- When the term `lastName` is referenced in an assignment, please replace it with your last name.

Download and extract the starter template zip file, `CS602_HW3_1stName`. Rename the folder with your last name. Complete the corresponding assignment files in this folder.

Part 1 – Express & MongoDB (25 Points)

This part is a redo of Module2 Assignment Part2. The web application remains the same. Redo the `ZipCodeModule` implementation using the file `mongo_zipCodeModule_v2.js` so that the three module functions get the data from the pre-populated MongoDB database as given in the assignment template files. The client test code is provided in `client.js` file and should produce the output as shown below after implementing the module functionality.

```
|> node client.js

Lookup by zip code (02215)
{ _id: '02215', city: 'BOSTON', pop: 17769, state: 'MA' }

Lookup by zip code (99999)
undefined

Lookup by city (BOSTON, MA)
{
  city: 'BOSTON',
  state: 'MA',
  data: [
    { zip: '02108', pop: 3697 },
    { zip: '02109', pop: 3926 },
    { zip: '02110', pop: 957 },
    { zip: '02111', pop: 3759 },
    { zip: '02114', pop: 10246 },
    { zip: '02113', pop: 6698 },
    { zip: '02115', pop: 25597 },
    { zip: '02116', pop: 17459 },
    { zip: '02210', pop: 308 },
    { zip: '02199', pop: 886 },
    { zip: '02215', pop: 17769 }
  ]
}

Get Population by State (MA)
{ state: 'MA', pop: 6016425 }
```

Now, test the web application similar to Module2 Assignment Part2 by copying the corresponding code from your Module2 submission.

Part 2 – Express Routing & Mongoose (75 Points)

Complete the Employee Mongoose schema (**employeeDB.js**) for the employee data to be stored in MongoDB with only the **firstName** and **lastName** properties for each employee. If you are using your own MongoDB database, run the **initDB.js** using node to initialize the database collection with at least three employees.

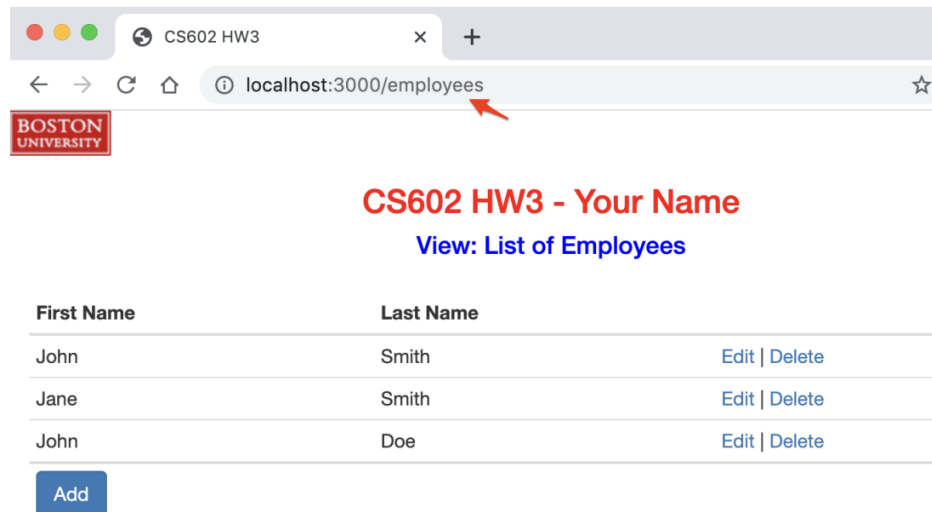
- Now, complete the Express web application (**server.js**) similar to **ex13_caseStudy** and use the Express Router to configure the paths for adding a new employee, deleting an existing employee, displaying all employees, and editing an existing employee. The application should have functionality similar to the **ex13_caseStudy** covered in the lecture. The data is persisted to the MongoDB database using Mongoose.

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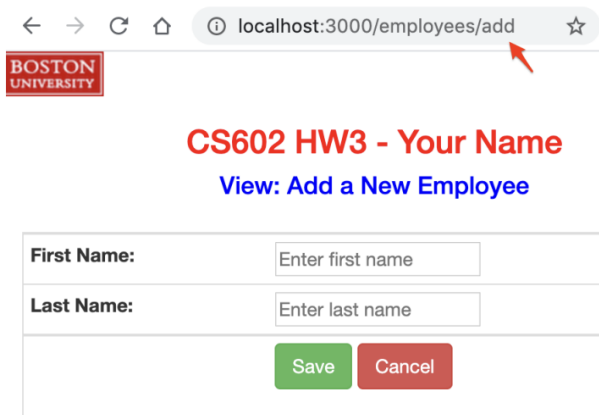
Ed Orsini | edorsini@bu.edu

- Add, Delete, and Edit views should have the Cancel feature.

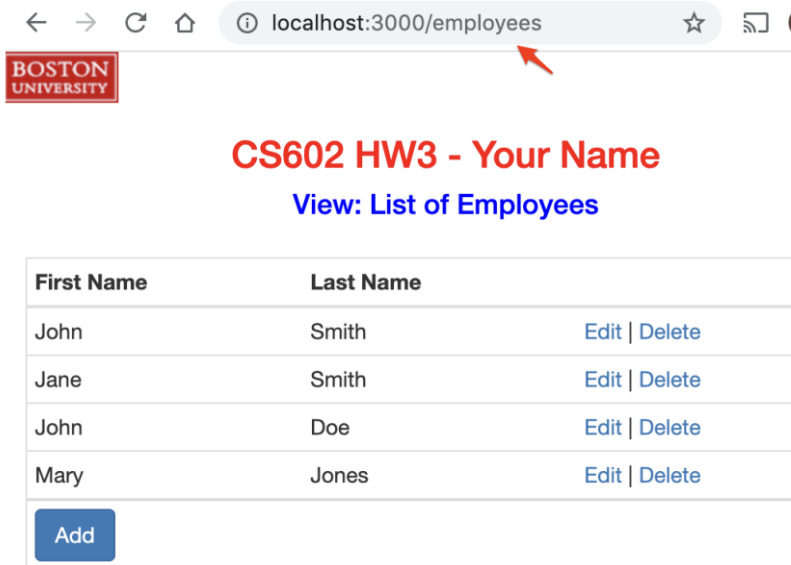
The initial display of the home page of the application (displayEmployeesView) is shown below:



If the user clicks the Add button, the `addEmployeeView` is rendered as below:



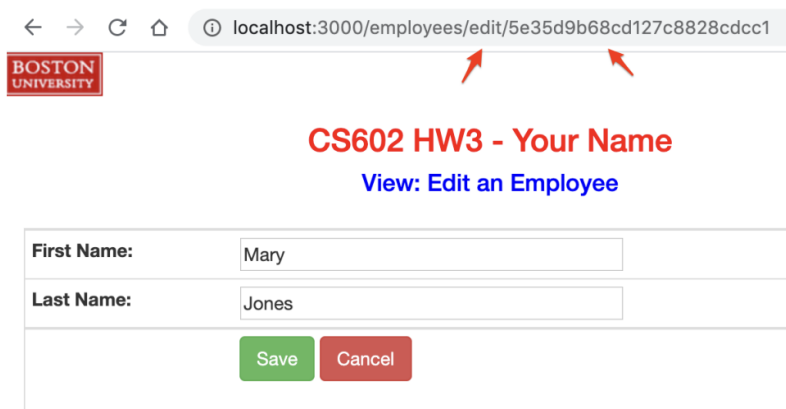
When the users submits the form with the new employee data, say, Mary Jones, the new employee data is persisted and the list of the employees is rendered as below:



First Name	Last Name	
John	Smith	Edit Delete
Jane	Smith	Edit Delete
John	Doe	Edit Delete
Mary	Jones	Edit Delete

[Add](#)

When the user clicks on Edit, the corresponding employee data is rendered by `editEmployeeView` as shown below:

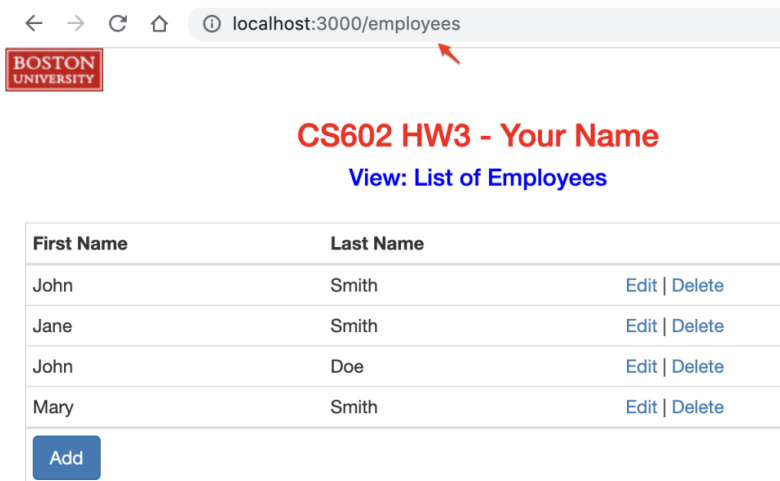


First Name:

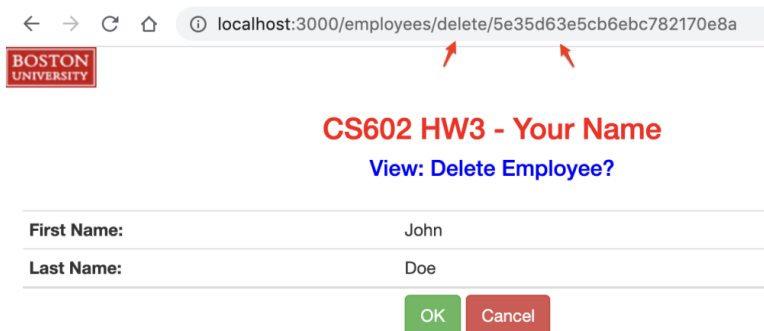
Last Name:

[Save](#) [Cancel](#)

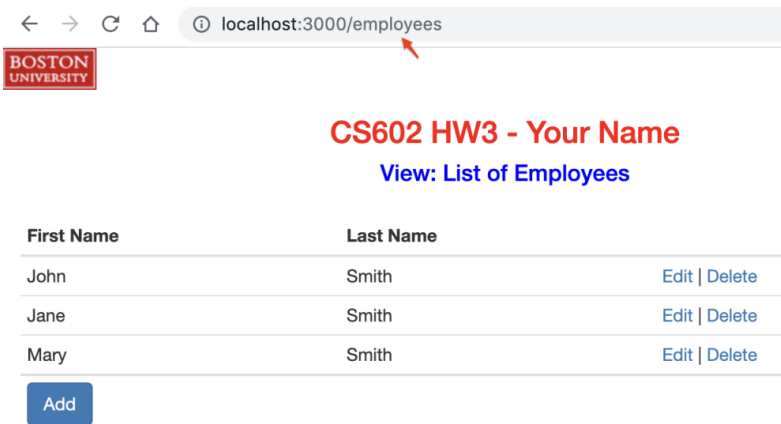
If the user changes Mary Jones to Mary Smith and clicks Save, the changes are persisted to the database and the list of the employees is rendered as below:



If the user clicks on Delete, a confirmation page rendered by `deleteEmployeeView` is shown:



If the user clicks OK, the corresponding data is deleted from the database and the list of the employees is rendered as below:



Submission

Export your `CS602_HW3_1stName` folder containing all the relevant files as a zip file, and upload the zip file to the Assignment section.