

CPS 490 - Fall 2018, Dr. Phu Phung

DataLayer Sample Code

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Introduction

This module is written to illustrate how you can implement an object-oriented programming style in Node.js

as well as how to use in your application.

The module will allow you to check if a given username/password is found in the database (stored in the users.json file).

You can also add a new user (with username/password) or change the password of an existing user.

The passwords are hashed using the 'bcrypt' module.

You are given the permission to use/revise/extend this module for your Sprint 2.

If you find any bug, please report to the instructor.

Preparation

You need to copy this whole folder into the current directory of your project.

This module uses two external modules: 'bcrypt' and 'input-is', therefore, you need to install those libraries:

```
$ npm i -S bcrypt input-is
```

You can also run the provided `install.sh` script to do the installation.

Manage the data

The given script `alter-user.js` allows you to add a new user, change the password of a current user, or validate a pair of username/password. Usage:

```
$ node alter-user -add|-update|-check <username> <password>
```

Usage in your Node.js application

In your Node.js application, e.g., `ChatServer.js`, you can use this module by loading it:

```
var jsongatabase = require('./datalayer/userManager');
```

After that, you can invoke the APIs to do the authentication or manage the users as follows.

APIs

User authentication

The `checkUser` API will check if the given username/password is found in the database:

```
jsondatabase.checkUser(username, password);
```

return true if found; false otherwise

Add new user

The addUser API will add the given username and password to the database:

```
jsondatabase.addUser(username, password);
```

return true if succeed; false otherwise

Change password

The updateUser API will change the password of the given username to the new password given:

```
jsondatabase.updateUser(username, newPassword);
```

return true if succeed; false otherwise