NodeJS / ExpressJS

**DEADLINE:** 10/04/2018

## FOLDER STRUCTURE

Homework\_08/

├─ controllers/

└─ handlers.js

├─ data/

└─ storage.json

├─ tests/

└─ api.tests.js

├─ package.json

├─ routes.js

└─ server.js

## TASK

Build a RESTful CRUD API with NodeJS and ExpressJS.

* To start use **$npm install** command with no args to install the dependencies from package.json manifest.
* Create a new server using [Express.js](http://expressjs.com/).
* As the main storage, you have to create a new file storage.json in the data folder.
* Create following [handlers](http://expressjs.com/en/guide/routing.html), which will be run according to the different requests:

POST /rockstar

GET /rockstars

GET /rockstar/{id}

PUT /rockstar/{id}

DELETE /rockstar/{id}

* Create routing module and drop it into the **routes.js** at the root.
* You have to separate handlers into **handlers.js** file in controllers folder.

**POST /rockstar**

Creates a new musician (add musician info into storage).

Response:

- 201 after successfully handling

- 409 if resource already exist

**GET /rockstars**

Returns list of musicians (whole data from storage).

Response: 200 after successfully handling

**GET /rockstar/{id}**

Returns musician data by id.

Response:

- 200 with the body after successfully handling

- 404 if musician has been not found

**PUT /rockstar/{id}**

Replace musician data by id.

Response:

- 200 with the new rockstar data in body

- 404 if musician has been not found

**DELETE /rockstar/{id}**

Removes musician data by id.

Response:

- 200 if rockstar has been removed. Body must contains the message about

successfully handling.

{ "message": "Musician has been successfully removed"}

- 404 if musician has been not found

* Add additional middleware to process POST body incoming values. Use body-parser.
* You could use the [fs](https://nodejs.org/api/fs.html#fs_fs_readsync_fd_buffer_offset_length_position) module for working with files.

## RESTRICTIONS

* test.api file shouldn't be touched at all
* node\_modules directory should be added into .gitignore

## DATA

[

{ "id": 1, "name": "David Jon Gilmour", "band": "Pink Floyd", "instrument": "multi-instrumental" },

{ "id": 2, "name": "Roger Waters", "band": "Pink Floyd", "instrument": "guitar" },

{ "id": 3, "name": "Jimmy Page", "band": "Led Zeppelin", "instrument": "guitar" },

{ "id": 4, "name": "James Douglas Morrison", "band": "The Doors", "instrument": "vocals" },

{ "id": 5, "name": "William Bruce Rose", "band": "Guns N' Roses", "instrument": "piano" }

]

## BEFORE SUBMIT

* Test API endpoints with Postman.
* Run **$npm test** command to check API handlers.

## USEFUL LINKS

* <http://expressjs.com>
* <https://www.getpostman.com/>
* <https://nodejs.org/api/>
* <https://mochajs.org/>