

# ShopBack

## Node.js Code Challenge

### Mission

Our online shopping web application runs on many devices and we need an API package to perform some authentication functions. “Users” of this API package are developers like you.

### Development Requirement

1. Your task is to create an API package in **NodeJS** with following requirements:
  - a. Allow users to register a new account with “name”, “email” and “password”.
  - b. Account login by “email” and “password”
    - Request should have a parameter to specify device info
    - Request should have a parameter to support language
    - Response: Contains a “uuid” in response header, for successful login
    - uuid is an OTP (one time password), which must be renewed in every request when you call any API. Every uuid will be expired after 2 hours, and users need login again to refresh it.
  - c. Logout
  - d. Search by email, name, latest access. It should support paging parameters.

2. ACL

We need to authorize users who can access our data. Example: admin@email.com can use any API. However user@email.com can call only signup, login and logout.

You need to make authorization on every API request, and define ACL configuration to make it flexible and easy to add a new API with its permissions, as well as to change permissions of existing APIs.

3. Data converter.

Because our application run on many devices with different purpose, we need to support many separated formats. Your source code should be designed for maintaining or updating a new device easily.

4. Database:

Please save your data in a local file, using json or another format of your choice.

## Example

Sign up	<pre>curl -H 'X-Device: mobile' \ -H 'X-Language: en' \ -H "Content-Type: application/json" -X POST \ -d '{"email":"xxx@email.com","password":"xyz"}' \ <a href="http://app.com/api/signup">http://app.com/api/signup</a></pre>
Sign in	<pre>curl -H 'X-Device: mobile' \ -H 'X-Language: en' \ -H "Content-Type: application/json" -X POST \ -d '{"email":"xxx@email.com","password":"xyz"}' \ <a href="http://app.com/api/signup">http://app.com/api/signup</a></pre>
Response for iOS login	<pre>Header: uuid: 'b9f84b6eae2850abbc4954a9ad6f9713' {   success: true,   data [{     email: "xxx@email.com",     fullname: "your name",     latest: 1522382993,     created: 1522382993   }, ]</pre>
Response for web_browser login	<pre>Header: uuid: 'b9f84b6eae2850abbc4954a9ad6f9713' {   success: true,   data [{     login_id: "xxx@email.com",     full_name: "your name",     latest_login: "2018-01-01 10:20:00",     created_date: "2018-01-01 10:20:00"   }, ]</pre>
Search user	<pre>curl -H 'X-Device: mobile' \ -H 'X-Language: en' \ -H "Content-Type: application/json" -H 'uuid: b9f84b6eae2850abbc4954a9ad6f9713' \ <a href="http://app.com/api/user/search?name=shopback">http://app.com/api/user/search?name=shopback</a></pre>

**NOTE:**

- If anything is unclear, you may set a reasonable assumption and state it at the beginning of the submission.
- For requirements in #1 and #2, you have to implement code by yourself (instead of using a library or a npm package).
- Please compress your project as a zip file and send back to us. DON'T publish it to Github or npm packages.