

# Backend Intern Coding Project

Four steps, please read all of them carefully before you start, use either **Python** or **Java** only and complete this project within two days.

## Step 1: Write a RESTful API.

- 1) This API is going to be used for a HTTP request.
- 2) This API should return data (below example) in a JSON format, please hardcoded the information at this time, you can make up to 6 Workers, the example just gives you an idea.

Example data Info:

```
Worker 0, host p2_pc
  CPU: [ ] 0 core(s) in use
  RAM: [ ] 1% 1.726 GiB/125.9 GiB
  VMEM: [ ] 0% 1.726 GiB/261.9 GiB
  GPU: GeForce RTX 2070, not used
Worker 1, host p1_01
  CPU: [|||||] 3 core(s) in use
  RAM: [|||||||] 17% 174.3 GiB/996 GiB
  VMEM: [|||||||] 13% 198.3 GiB/1.473 TiB
Worker 2, host p2_00
  CPU: [|||||||||||||||||||||||||||||||||||||||||] 32 core(s) in use
  RAM: [||] 3% 37.32 GiB/1008 GiB
  VMEM: [|||||] 10% 157.3 GiB/1.485 TiB
  GPU: GeForce RTX 2080 Ti, not used
Worker 5, host filecoin
  CPU: [|||||||||||||||||||||||||||||||||||||||||] 48 core(s) in use
  RAM: [|||||||] 13% 32.55 GiB/244 GiB
  VMEM: [|||||||||||||||||||||] 43% 152.6 GiB/352 GiB
  GPU: GeForce GTX 1080 Ti, not used
```

JSON Key example:

{worker\_id, worker\_name, cpu\_usage.... etc.}

\*Be aware, some of the workers should has no GPU pre-installed.

- 3) Included some error messages is a bonus point, you can make some errors.

## Step 2: Write a TEST case, Call and test the API, SAVE the Test report to any file type like (txt, csv... etc.).

## Step 3: Write a SAVE2CSV function.

- 1) Each time, when this API has been called, record **API\_CALL\_DATA**, **API\_KEY** and **API\_VALUE** to a CSV file.
- 2) This CSV file can be appended.

## Step 4: Record actions and result to MySQL DB.

- 1) Every time when this API has been called should record to this DB.
- 2) Design a simple MySQL DB at your experience
- 3) DB table should include but not limited to below important info:
  - admin\_id (who call this API, you can assign **admin\_1** at this point)
  - call\_date
  - call\_time
  - result (success/failed)
  - error\_counts (the total number of errors that happened on that particular API call each time.)

Send Git or ZIP included all codes with DB schema to [rmiller@nbai.io](mailto:rmiller@nbai.io).