

- Option 1: directly install on the PC
 1. [Set up Ubuntu](#)
 2. [How to Check your Ubuntu Version](#)

\$ lsb_release -a

3. Enable the NodeSource repository by running the following curl

\$ curl -sL https://deb.nodesource.com/setup_10.x | sudo -E bash -

4. Install Node.js and npm

\$ sudo apt install nodejs

5. Verify that the Node.js and npm were successfully

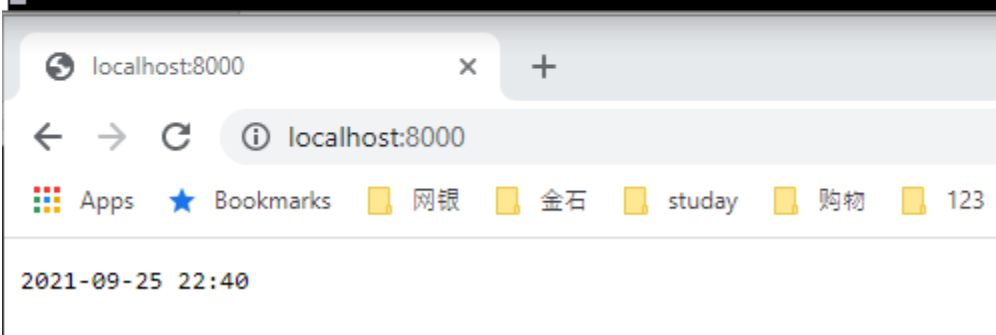
\$ node --version

\$ npm --version

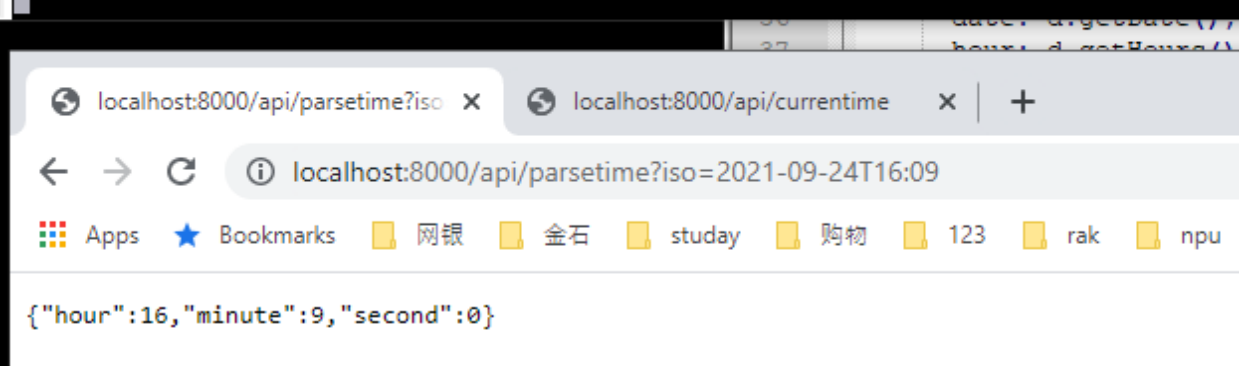
```
wayne@DESKTOP-H61AHKT:~$
wayne@DESKTOP-H61AHKT:~$
wayne@DESKTOP-H61AHKT:~$ node --version
v10.24.1
wayne@DESKTOP-H61AHKT:~$
wayne@DESKTOP-H61AHKT:~$
wayne@DESKTOP-H61AHKT:~$ npm --version
6.14.12
wayne@DESKTOP-H61AHKT:~$
```

TimeServer

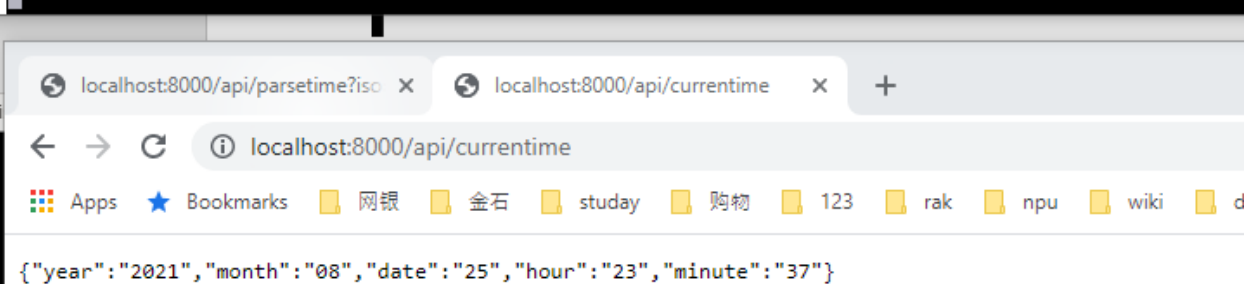
```
wayne@DESKTOP-H61AHKT:~/nodejs$
wayne@DESKTOP-H61AHKT:~/nodejs$ vim time_server.js
wayne@DESKTOP-H61AHKT:~/nodejs$
wayne@DESKTOP-H61AHKT:~/nodejs$
wayne@DESKTOP-H61AHKT:~/nodejs$ node time_server.js 8000
Node server running on http://localhost:8000
```



```
wayne@DESKTOP-H61AHKT:~/nodejs$  
wayne@DESKTOP-H61AHKT:~/nodejs$  
wayne@DESKTOP-H61AHKT:~/nodejs$ node json_api_server.js 8000
```



```
wayne@DESKTOP-H61AHKT:~/nodejs$  
wayne@DESKTOP-H61AHKT:~/nodejs$  
wayne@DESKTOP-H61AHKT:~/nodejs$ node json_api_server.js 8000
```



Add code

```
function zeroFill(i) {  
    return (i < 10 ? '0' : '') + i  
}  
function now () {  
    var d = new Date()  
    return {  
        year: zeroFill(d.getFullYear()),  
        month: zeroFill(d.getMonth()),  
        date: zeroFill(d.getDate()),  
        hour: zeroFill(d.getHours()),  
        minute: zeroFill(d.getMinutes())  
    }  
}
```

```

var server = http.createServer(function (req, res) {
  // req.url = /api/parsetime?iso=2013-08-10T12:10:15.474Z
  //      or
  // req.url = /api/unixtime?iso=2013-08-10T12:10:15.474Z
  var parsedUrl = url.parse(req.url, true)

  // time = 2013-08-10T12:10:15.474Z
  var time = new Date(parsedUrl.query.iso)
  var result

  // match req.url with the string /api/parsetime
  if (/^\/api\/parsetime/.test(req.url))
    // e.g., of time "2013-08-10T12:10:15.474Z"
    result = parsetime(time)
  // match req.url with the string /api/unixtime
  else if (/^\/api\/unixtime/.test(req.url))
    result = unixtime(time)
  else if (req.url == '/api/currenttime')
    result = now()

  if (result) {
    res.writeHead(200, { 'Content-Type': 'application/json' })
    res.end(JSON.stringify(result))
  }
  else {
    res.writeHead(404)
    res.end()
  }
})
server.listen(Number(process.argv[2]))

```

```

////////////////////////////////////
//
// Write an HTTP server that serves JSON data when it
// receives a GET request to the path '/api/parsetime'.
//
////////////////////////////////////
var http = require('http')
var url = require('url')

// - Expect the request to contain a query
// string with a key 'iso' and an ISO-format time as

```

```

// the value. For example
// /api/parsetime?iso=2013-08-10T12:10:15.474Z
// - The JSON response should contain only 'hour', 'minute'
// and 'second' properties. For example:
//
// {
//   "hour": 14,
//   "minute": 23,
//   "second": 15
// }
//
function parsetime (time) {
  return {
    hour: time.getHours(),
    minute: time.getMinutes(),
    second: time.getSeconds()
  }
}

// Add second endpoint for the path '/api/unixtime' which
// accepts the same query string but returns UNIX epoch
// time under the property 'unixtime'. For example:
//
// { "unixtime": 1376136615474 }
function unixtime (time) {
  return { unixtime : time.getTime() }
}

function zeroFill(i) {

```

```

    return (i < 10 ? '0' : '') + i
}

function now () {
    var d = new Date()
    return {
        year: zeroFill(d.getFullYear()),
        month: zeroFill(d.getMonth()),
        date: zeroFill(d.getDate()),
        hour: zeroFill(d.getHours()),
        minute: zeroFill(d.getMinutes())
    }
}

```

```

var server = http.createServer(function (req, res) {
    // req.url = /api/parsetime?iso=2013-08-10T12:10:15.474Z
    //    or
    // req.url = /api/unixtime?iso=2013-08-10T12:10:15.474Z
    var parsedUrl = url.parse(req.url, true)

    // time = 2013-08-10T12:10:15.474Z
    var time = new Date(parsedUrl.query.iso)
    var result

    // match req.url with the string /api/parsetime
    if (/^\/api\/parsetime/.test(req.url))
        // e.g., of time "2013-08-10T12:10:15.474Z"
        result = parsetime(time)
    // match req.url with the string /api/unixtime
    else if (/^\/api\/unixtime/.test(req.url))

```

```
    result = unixtime(time)
else if (req.url == '/api/currenttime')
    result = now()

if (result) {
    res.writeHead(200, { 'Content-Type': 'application/json' })
    res.end(JSON.stringify(result))
}
else {
    res.writeHead(404)
    res.end()
}
})
server.listen(Number(process.argv[2]))
```