

20. Installing Express.js

Wednesday, May 29, 2024

11:33 AM

app.js

Remove routes

```
Node-Max > JS app.js > ...
1 // import a global module named http
2 const http = require('http');
3
4 // import private modules
5 const routes = require('./routes');
6
7 // execute functions stored in ./routes
8 // for incoming requests
9 const server = http.createServer(routes.handler);
10
11 console.log(`routes.someText: ${routes.someText}`);
12
13 const port = 3005;
14 server.listen(port, () => {
15   console.log(`Server running at http://localhost:${port}`);
16 });
```

Also remove routes.handler from http.createServer();

```
Node-Max > JS app.js > [E] server
1 // import a global module named http
2 const http = require('http');
3
4 // execute functions stored in ./routes
5 // for incoming requests
6 const server = http.createServer(routes.handler);
7
8 console.log(`routes.someText: ${routes.someText}`);
9
```



```
10   const port = 3005;  
11   server.listen(port, () => {  
12     console.log(`Server running at http://localhost:\${port}`);  
13   });
```

Install Express.js as a Prod dependency

npm install --save express;

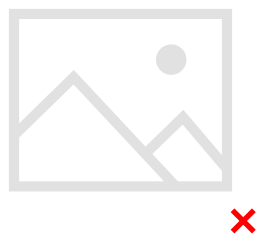
```
$ npm install --save express;  
  
added 70 packages, and audited 102 packages in 29s  
  
17 packages are looking for funding  
  run `npm fund` for details  
  
found 0 vulnerabilities
```

We see "express" is now under dependencies

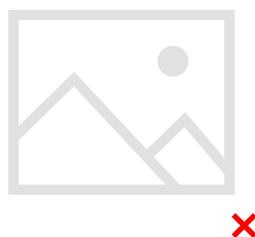
In fact, nodemon should be under "devDependencies" category, I'm just too lazy to fix this nodemon category here ;)



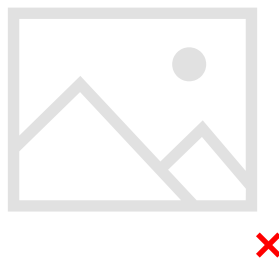
Large numbers of logics are implemented using **const app**



This will create an Express server



Adding Middleware



Using Express Middleware



Express middleware design pattern



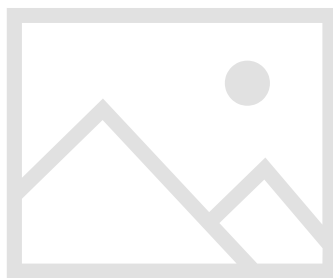
```
app.use((req, res, next) => {});
```

req = HTTP request

res = HTTP response

next = next function to allow the request to travel on the next middleware

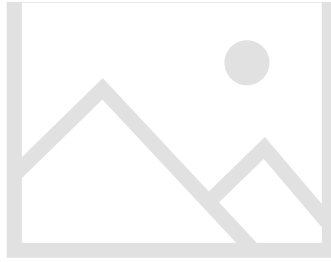
We have 2 Middleware now



Nevertheless, we do NOT see 2 middleware in our terminal



**Using next() in our 1st Express Middleware function
to allow our 1st Express Middleware to travel to the next
Middleware**



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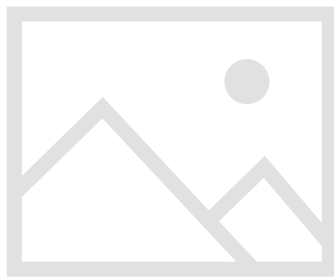
If we do NOT use next() in a Middleware, we MUST send back a response

Otherwise, our Middleware will get stuck & entire Express app will crash



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Let's send a HTTP response in our 2nd Middleware



Testing Express app in Browser





F12 Network Tab



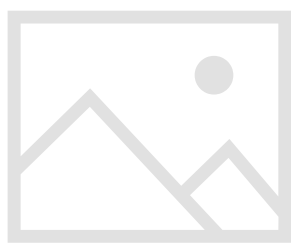
Looking behind the Scenes of Express.js

Express github

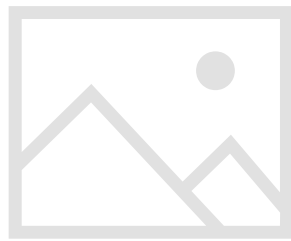
`express/lib/response.js`



express.js response.js module checks for the data type of data chunks



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instead of
`const server = http.createServer(app);`


```
server.listen(port);
```

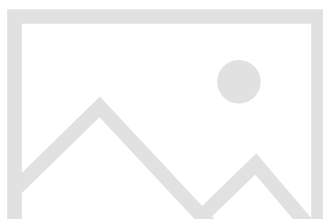


In fact, Express already handled this in application.js of Express Module

```
const server = http.createServer();
```

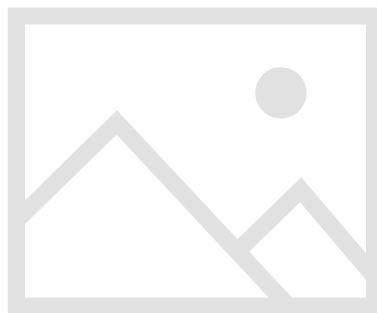


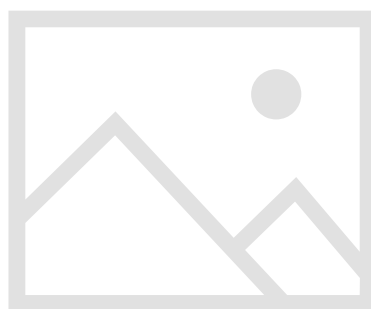
we can use **app.listen()**



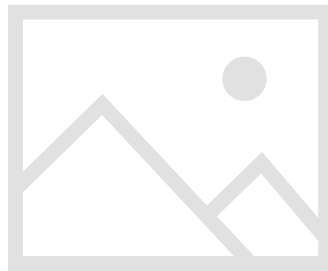


Handling different Routes
See Express documentation











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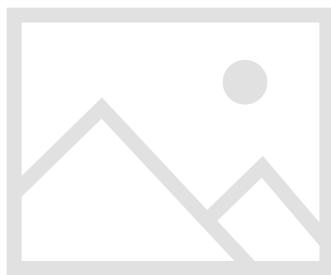


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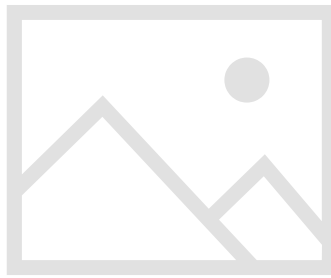
Adding an Express route for '/'



**It will be inappropriate to add
res.send()
next()**

...next,

Because a middleware ends with a Response & should no longer do other actions

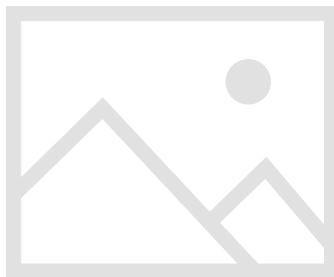


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We should ensure that responses are NOT sent multiple times

inside an Express middleware

The appropriate way of using an Express middleware without sending back a Response



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