

## Node.js

- An environment to run JS outside browser
- Created in 2009
- Built on chrome's v8 JS Engine
- Big community
- Full stack
- V8 - Every browser needs a tool that compiles our code down to machine code and chrome uses V8 as this tool.
- server side.

Browser	NodeJS
DOM	No DOM
Window	No window
Interactive Apps, GUI	Server side app, no GUI
No filesystem	can access filesystem
Fragmentation	Versions
ES6 Modules	CommonJS (by default)

## How to start

- On terminal type 'node'

Repl → Read Eval Printloop & cli executable

How to run ->

node filename.js or node filename  
eg. node app.js

app.js.

```
const amount = 9
if(amount < 10)
{
    console.log('Small number')
}
else
{
    console.log('Big number')
}
```

console.log('hey, Its my first node app')

## Global variables — No WINDOW!!

- can access anywhere in code

\* --dirname - path to current directory

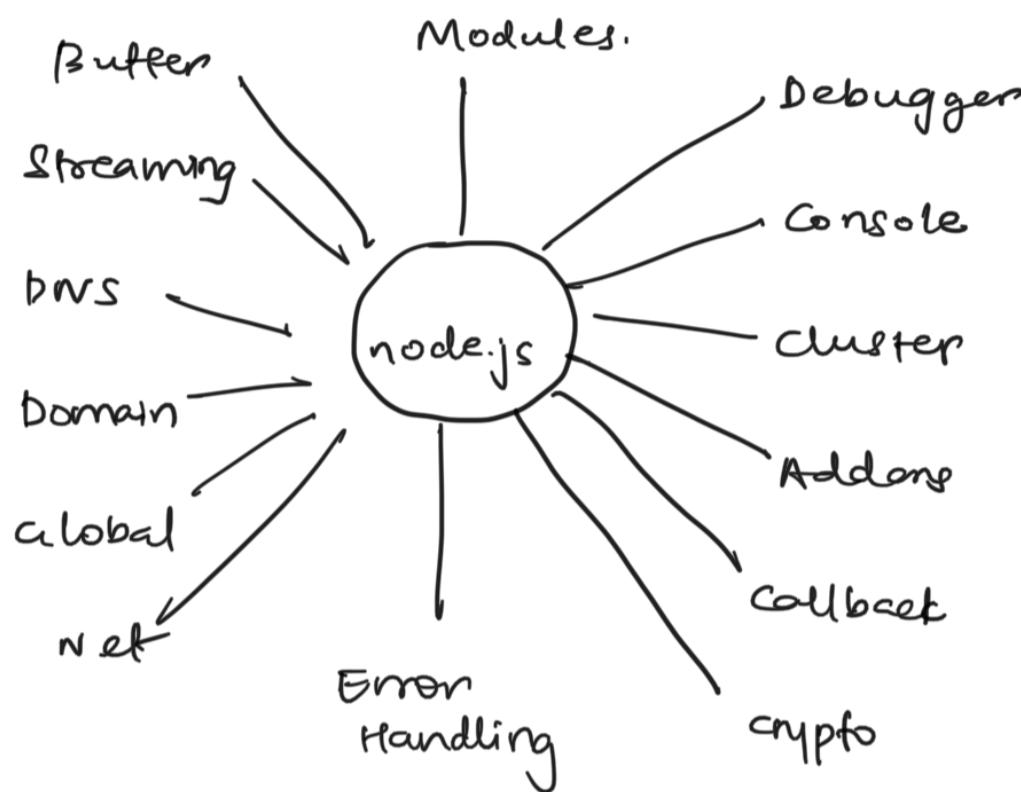
\* --filename - file name

\* require - function to use modules. (CommonJS)

- \* module - info about current module (file)
- \* process - info about env where the program is being executed.

```
setInterval(()) => {
  console.log('HelloWorld') → will output HelloWorld
  3, 1000) after every 1000ms
```

## Some important parts of node.js



## Features

1. Extremely fast code execution
2. I/O is Asynchronous and Event driven
3. Single threaded
4. Highly Scalable.
5. No buffering
6. Open source
7. License. - released under MIT License

## NodeJS Console

console.log() → display simple message on console

console.error() → render error message on console

console.warn() → display warning message on console

## Module in node:

modularize the code , separate into files

- \* Module: Encapsulated code (share only minimum)
- \* every file is a module by default.

## names.js

```
// local
const secret = "SUPER SECRET"
// share
const john = 'john'
```

const peter = 'peter'  
it is an array in module, will have shared values in it.

module.exports = {john, peter}  
key - john, value: john  
key val = 'peter'

### utils.js

```
const sayHi = (name) => {
    console.log(`Hello ${name}`)
}
```

```
module.exports = sayHi;
```

### module.js

```
const names = require('./names')
```

```
const sayHi = require('./utils')
```

// const {john, peter} = require('./names')

```
sayHi('susan')
```

```
sayHi(names.john)
```

```
sayHi(names.peter)
```

```
const data = require('./alternative-flavor')
```

```
console.log(data). // obj. { items: ['item1', 'item2'] }
```

```
singlePerson: { name: 'bob' }.
```

require('./07-mind-grenade') → even if you don't assign to a variable, the code inside the module will run.

### alternative-flavor.js

```
module.exports.items = ['item1', 'item2']
```

```
const person = {
    name: 'bob',
}
```

```
module.exports.singlePerson = person.
```

\* Remember: When you import a module, you actually invoke it.

### Built-in modules

OS, PATH, FS, HTTP

OS  
const os = require('os')  
const user = os.userInfo()  
console.log(user)

// to get system uptime  
os.uptime()  
console.log('Uptime is \${os.uptime()}' )

OS.type() → os name. unix / oswin / windows-nt  
OS.release() → os release.

OS.totalmem() → total memory of system (bytes)

OS.freemem() → free memory (in bytes)

many other methods.

## ~~PATH~~

const path = require('path')

console.log(path.sep) → path separator. / or \.

OP - / join all args together.

const filePath = path.join('/content/', 'subfolder', 'test.txt')

console.log(filePath)

//op. /content/subfolder/test.txt

last portion of path.

const base = path.basename(filePath)

console.log(base)

//op test.txt

resolve an abs path

const absolute = path.resolve(\_\_dirname, 'content', 'subfolder', 'test.txt')

console.log(absolute)

OP /User/Smilga/Desktop/tutorial/content/subFolder/test.txt

~~fs~~ synchronous  
asynchronous

const {readFileSync, writeFileSync} = require('fs')

fs-sync.js

const first = readFileSync('./content/first.txt', 'utf8')

const second = — u ————— second.txt', 'utf8')

writeFileSync(

'./content/result.txt', → file to write into.

• Here is result: \${first}, \${second}', → content

{flag = 'a'} → append.

)

Asynchronous. fs-async.js

Callback - we run it when we are done

const {readFile, writeFile} = require('fs')

console.log('start')

readFile('./content/f1.txt', 'utf8', (err, result) => {

if (err){

console.log(err)

return

```

    }
    const first = result;
    // read second.txt same as above.

    writefile(
        './content/result.txt',
        `Here is result : ${first}, ${second}`,
        (err, result) => {
            if (err)
                {
                    log error
                    return
                }
            console.log('done with this task')
        }
    )
}

```

Op - start

Starting next task  
done with this task.

console.log('starting next task')

↑ is a tedious approach, instead use promise & async, await

## HTTP

```

const http = require('http')
const server = http.createServer((req, res) => {
    if (req.url === '/')
    {
        res.end('Homepage')
    }
    else if (req.url === '/about')
    {
        res.end('About')
    }
    else
    {
        res.end(`
            <h1> oops! </h1>
            <p> Cant find page </p>
            <a href="/"> back home </a>
        `)
    }
})

```

3)

server.listen(5000);

## NPM Node Package Manager

When we install node we automatically install npm  
npm available in the system

NPM enables us to do 3 things -

- 1) reuse our code in other projects
- 2) use code written by other developers.
- 3) share our own code with other developers.

package → reusable code.

↳ a folder that contains js code

package = module = dependency

NPM --version.

// local dependency - use only in this particular project

npm i <packageName>

// global dependency - use in any project

npm install -g <packageName>

// sudo npm install -g <packageName> // on mac.

### package.json

- manifest file (store important info about proj / package)

3 ways to create

1. manually (create it in root, create properties etc).
2. npm init (step by step, press enter to skip)
3. npm init -y (everything default).

\* package.json will have dependencies we add using npm i.

\* The dependencies will be in node-modules folder.

When you push your code, you don't need to add the node-modules folder.

When we type npm install all dependencies inside package.json are fetched and node-modules is created.

### dev dependency

npm i <packageName> -D

or npm i <pkgname> --save-dev

eg npm i nodemon -D

→ automatically restarts app on detecting changes.

Why dev dependency - we use it only while building our app we don't need them in production.

package.json → scripts.

"scripts": {

"start": "node 01-intro.js", → npm start will run 01-intro.js.

"dev": "nodemon app.js" → npm run dev will execute  
}, app.js

- \* npm uninstall bootstrap  
or you can remove from dependencies in package.json,  
delete node\_modules and use npm install

npx → execute.

→ a package runner.

npx create-react-app my-app.

cd my-app

npm start

npx preferred over global installation.

npx nodemon app.js.

package-lock.json

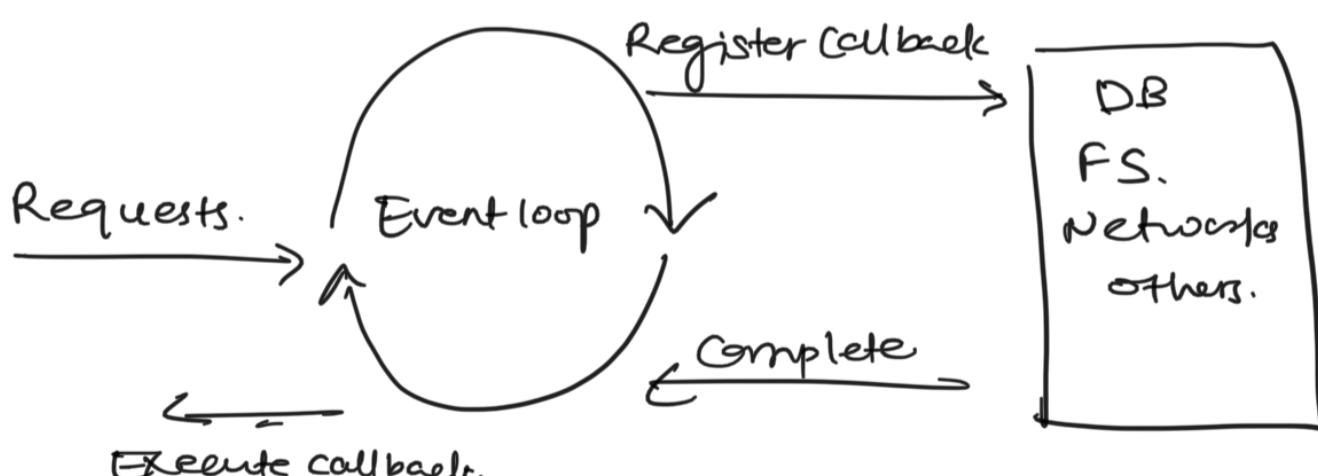
so you want users to use same versions of dependencies  
as you did.

And when you install dependency many modules can be  
added. eg - bootstrap will add jquery, etc too

so package-lock.json will define versions for all  
the dependencies (including jquery etc)

Event loop

Event loop is what allows node.js to perform non blocking  
I/O operations - despite the fact that Javascript is  
single threaded - by offloading operations to system  
kernel whenever possible.



```
console.log('first')
setTimeout(() => {
    console.log('second')
    3,0)
})
console.log('third').
```

OP - first  
third      b/c setTimeout is asynchronous.  
second

Another eg - readfile → asyne

eg - setInterval()

```
setInterval(() => {
    console.log('Hello World')
}, 2000)
console.log('I run first')
```

OP    I run first  
Hello world  
Hello world  
:  
∞.

eg. server.listen(5000, () => {
 console.log('listening on :5000')
})

All these codes with asyne calls turn messy soon.

Alternative

- Promise, async, await.

```
const {readfile, writefile} = require('fs').promises
// const util = require('util')
// const readfilePromise = util.promisify(readfile)
// const writefilePromise = util.promisify(writefile).
```

const start = async() => {
 try {
 const first = await readfile('./content/first.txt', 'utf8')
 const second = await readfile('./content/second.txt', 'utf8')
 await writefile(
 './content/result.txt',
 `This is awesome \${first}, \${second}`,
 {flag: 'q'}
 )
 console.log(first, second)
 } catch (error) {
 console.log(error)
 }
}
start().  
  
use -  
try  
catch:

JR

```
const getText = (path) => {
    return new Promise((resolve, reject) => {
        readfile(path, 'utf8', (err, data) => {
            if (err) {
                reject(err)
            } else {
                resolve(data)
            }
        })
    })
}
```

```

if (err)
{
    reject(err)
}
else
{
    resolve(data)
}
}

}

getTxt('./content/f1.txt')
    .then((result) => console.log(result))
    .catch((err) => console.log(err))

```

not clean  
use  
above  
code  
instead

## Events

Event driven programming → do something on certain event  
eg click, hover etc

How is it in server side?

We listen for specific events and register functions that will execute in response to those events.

```
const EventEmitter = require('events');
        ↓class
```

If you want custom event → extend that class  
else just create an instance of the class

```
const customEmitter = new EventEmitter() //instance

customEmitter.on('response', () => { → callback fn
    // Listen to an event → on
    console.log('data received')
})

customEmitter.emit('response') //emits an event with
                                name 'response'
```

- 1) We can have multiple on for single event
- 2) We can also pass parameter to on callback function.
- 3) The order of on & emit matters.  
We can only emit on listening.

eg.

```
const http = require('http')
const server = http.createServer()
server.on('request', (req, res) => {
    res.end('Welcome')
}) → http server will have
                                transient name
```

3)

server.listen(5000)

which eventually  
extends EventEmitter

Streams → used to read or write sequentially.

Extend EventEmitter class

Writable → write sequentially

Readable → read — u —

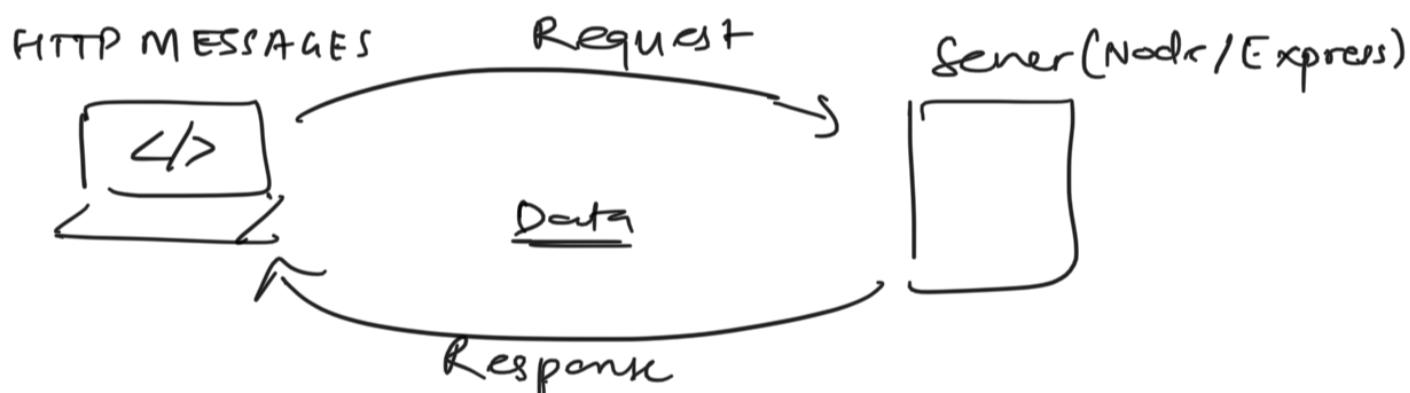
Duplex → read/write — u —

Transform → modify when read/write

If file is too big, use read stream instead of storing files

```
const { createReadStream } = require('fs')
const stream = createReadStream('./content/big.txt')
stream.on('data', (result) => {
  console.log(result)
})
stream.on('error', (err) => console.log(err))
```

How web browser work?



Request message

method → GET /contact HTTP/1.1

options → Headers  
Body

Response message

status code  
HTTP/1.1 200 OK → status text

Headers  
Body - optional

Common ports:

20 - FTP (Data Transfer)

21 - FTP (Command Tool)

22 - SSH

25 - SMTP

53 - DNS

80 - HTTP

443 - HTTP Secure (HTTPS) - HTTP over TLS/SSL

HTTP Response codes .

1. Informational Response 100 - 199

2 successful Response	200 - 299
3 Redirects	300 - 399
4 Client errors	400 - 499
5 Server errors	500 - 599

MIME - Multipurpose Internet Mail Extensions (MIME type)  
 indicates nature & format of a document

Problem with prev http req

1. There is no info on headers.
2. for every url it will give same response  
 /, /contact, /about, /error/info → op→ same  
 or you have to write code for every res in webpage!!

1 →

```
res.writeHead(200, { 'content-type': 'text/html' })
res.write('<h1>Hello Home </h1>')
res.end()
```

2 → we will use express.

Express - a minimal and flexible node.js app framework designed to make developing websites, webapps and apis much faster and easier  
 - It is not a builtin module like http, fs etc

npm install express  
 methods  
 app.get  
 post  
 put  
 delete  
 all  
 use //middleware  
 listen

```
const express = require('express')
const app = express()
```

```
app.get('/', (req, res) => {
  console.log('hit')
  res.status(200).send('Home Page').
```

Similarly about

```
app.all('*', (req, res) => {
  res.status(400).send('error')
```

3)

```

app.listen(5000, () => {
    console.log('Port 5000')
})

const path = require('path')
app.use(express.static('./public'))

app.get('/', (req, res) => {
    res.sendFile(__dirname, './new-app/index.html')
})

```

## Express - API vs Server Side Rendering (SSR)

API - JSON  
Send Data  
res.json()

SSR - Template  
Send Template  
res.render()

API - Server provides data  
res.json().

```

app.get('/' , (req, res) => {
    res.json([{"name": "Marry"}, {"name": "Susan"}])
})

```

---

JS 05-all-static.js JS 06-basic-json.js JS 07-params-query.js X JS data.js index.html package-lock.json

02-express-tutorial > final > JS 07-params-query.js > app.get('/api/products/:productID') callback

```
1 const express = require('express')
2 const app = express()
3 const { products } = require('./data')
4
5 app.get('/', (req, res) => {
6   res.send('<h1> Home Page</h1><a href="/api/products">products</a>')
7 })
8 app.get('/api/products', (req, res) => {
9   const newProducts = products.map((product) => {
10     const { id, name, image } = product
11     return { id, name, image }
12   })
13
14   res.json(newProducts)
15 })
16 app.get('/api/products/:productID', (req, res) => {
17   // console.log(req)
18   // console.log(req.params)
19   const { productID } = req.params
20
21   const singleProduct = products.find(
22     (product) => product.id === Number(productID)
23   )
24   if (!singleProduct) {
25     return res.status(404).send('Product Does Not Exist')
26   }
27
28   return res.json(singleProduct)
29 })
30
31 app.get('/api/products/:productID/reviews/:reviewID', (req, res) => {
32   console.log(req.params)
33   res.send('hello world')
34 })
```

route parameter

multiple params

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

node - final

```
at Function.executeUserEntryPoint [as runMain] (node:internal/modules/run_main:81:12) {
  code: 'MODULE_NOT_FOUND',
  requireStack: [
    '/Users/harshali15/Desktop/node-express-course/02-express-tutorial/final/06-basic-json.js'
  ]
}
❶ harshalil15@Harshalis-Air final % node 06-basic-json.js
Server is listening on port 5000...
^C
❷ harshalil15@Harshalis-Air final % node 07-params-query.js
Server is listening on port 5000...
```

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```
JS 05-all-static.js      JS 06-basic-json.js      JS 07-params-query.js X    JS data.js      ↲ index.html      {} package-lock.json      JS
02-express-tutorial > final > JS 07-params-query.js > app.get('/api/products/:productID') callback
30
31   app.get('/api/products/:productID/reviews/:reviewID', (req, res) => {
32     console.log(req.params)
33     res.send('hello world')
34   })
35
36   app.get('/api/v1/query', (req, res) => {
37     // console.log(req.query)
38     const { search, limit } = req.query
39     let sortedProducts = [...products]
40
41     if (search) {
42       sortedProducts = sortedProducts.filter((product) => {
43         return product.name.startsWith(search)
44       })
45     }
46     if (limit) {
47       sortedProducts = sortedProducts.slice(0, Number(limit))
48     }
49     if (sortedProducts.length < 1) {
50       // res.status(200).send('no products matched your search');
51       return res.status(200).json({ sucess: true, data: [] })
52     }
53     res.status(200).json(sortedProducts)
54   })
55
56   app.listen(5000, () => {
57     console.log('Server is listening on port 5000....')
58   })
59
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

```
at Function.executeUserEntryPoint [as runMain] (node:internal/modules/run_main:81:12) {
  code: 'MODULE_NOT_FOUND',
  requireStack: [
    '/Users/harshali15/Desktop/node-express-course/02-express-tutorial/final/06-basic-json.js'
  ]
} harshalil15@Harshalis-Air final % node 06-basic-json.js
Server is listening on port 5000....^C harshalil15@Harshalis-Air final % node 07-params-query.js
Server is listening on port 5000....
```

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Middleware — functions that execute during request to the server

Each middleware fn has access to request & response.

req  $\Rightarrow$  middleware  $\Rightarrow$  res.

const app = express() args are passed by express automatically.

const logger = (req, res, next) => {

const method = req.method

-> url = req.url

-> time = new Date().getFullYear()

console.log(url, method, time)

next()

}

app.get('/', logger, (req, res) => {

res.send('Home')

})

### Better way

put logger in a separate file logger.js.

const logger = require('./logger')

app.use(logger) log for each url  
OR

app.use('/api', logger) log for any url starting with/api.

OR

for multiple fns

app.use([logger, authorized])

executed in order.

### logger-

1) your own

2) express (static)

3) 3rd party (morgan('tiny'))

### Other http methods

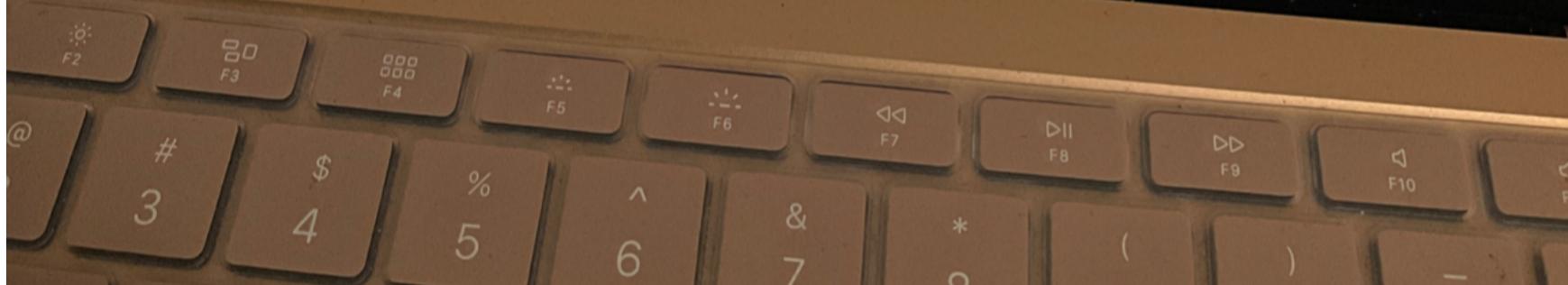
```
... ze.js      JS logger.js      JS data.js      < index.html .../navbar-app      < javascript.html      < index.html .../me
02-express-tutorial > final > JS 11-methods.js > ...
1 const express = require('express')
2 const app = express()
3 let { people } = require('./data')
4
5 // static assets
6 app.use(express.static('./methods-public'))
7 // parse form data
8 app.use(express.urlencoded({ extended: false }))
9 // parse json
10 app.use(express.json())
11
12 app.get('/api/people', (req, res) => {
13   res.status(200).json({ success: true, data: people })
14 })
15
16 app.post('/api/people', (req, res) => {
17   const { name } = req.body
18   if (!name) {
19     return res
20     .status(400)
21     .json({ success: false, msg: 'please provide name value' })
22   }
23   res.status(201).json({ success: true, person: name })
24 })
25
26 app.post('/api/postman/people', (req, res) => {
27   const { name } = req.body
28   if (!name) {
29     return res
30     .status(400)
31     .json({ success: false, msg: 'please provide name value' })
32   }
33   res.status(201).json({ success: true, data: [...people, name] })
34 })
```

PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL

Error: Cannot find module '/Users/harshali15/Desktop/node-express-course/02-express-tutorial/final/methods.js'  
at Function.Module.\_resolveFilename (node:internal/modules/cjs/loader:985:15)  
at Function.Module.\_load (node:internal/modules/cjs/loader:833:27)  
at Function.executeUserEntryPoint [as runMain] (node:internal/modules/run\_main:81:12)  
at node:internal/main/run\_main\_module:22:47 {  
 code: 'MODULE\_NOT\_FOUND',  
 requireStack: []  
}

harshalil15@Harshalis-Air final % node 11-methods.js  
Server is listening on port 5000....

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```
... ze.js      JS logger.js      JS data.js      <> index.html .../navbar-app      <> javascript.html      <> index.html .../methods-pub
02-express-tutorial > final > JS 11-methods.js > ...
36 app.post('/login', (req, res) => {
37   const { name } = req.body
38   if (name) {
39     return res.status(200).send(`Welcome ${name}`)
40   }
41
42   res.status(401).send('Please Provide Credentials')
43 })
44
45 app.put('/api/people/:id', (req, res) => {
46   const { id } = req.params
47   const { name } = req.body
48
49   const person = people.find((person) => person.id === Number(id))
50
51   if (!person) {
52     return res
53       .status(404)
54       .json({ success: false, msg: `no person with id ${id}` })
55   }
56   const newPeople = people.map((person) => {
57     if (person.id === Number(id)) {
58       person.name = name
59     }
60     return person
61   })
62   res.status(200).json({ success: true, data: newPeople })
63 }
64
65 app.delete('/api/people/:id', (req, res) => {
66   const person = people.find((person) => person.id === Number(req.params.id))
67   if (!person) {
68     return res
69       .status(404)
```

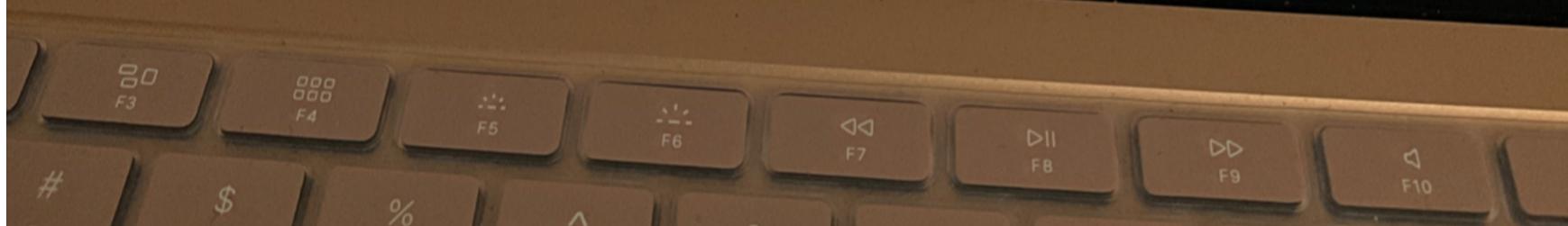
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

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 code: 'MODULE\_NOT\_FOUND',  
 requireStack: [] }

harshali15@Harshalis-Air final % node 11-methods.js  
Server is listening on port 5000....

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```
... ze.js      JS logger.js      JS data.js      < index.html .../navbar-app      < javascript.html      < index.html .../methods-public
02-express-tutorial > final > JS 11-methods.js > ...
65 app.delete('/api/people/:id', (req, res) => {
66   const person = people.find((person) => person.id === Number(req.params.id))
67   if (!person) {
68     return res
69       .status(404)
70       .json({ success: false, msg: `no person with id ${req.params.id}` })
71   }
72   const newPeople = people.filter(
73     (person) => person.id !== Number(req.params.id)
74   )
75   return res.status(200).json({ success: true, data: newPeople })
76 })
77
78 app.listen(5000, () => {
79   console.log('Server is listening on port 5000....')
80 })
81
```

PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL

Error: Cannot find module '/Users/harshali15/Desktop/node-express-course/02-express-tutorial/final/methods.js'  
at Function.Module.\_resolveFilename (node:internal/modules/cjs/loader:985:15)  
at Function.Module.\_load (node:internal/modules/cjs/loader:833:27)  
at Function.executeUserEntryPoint [as runMain] (node:internal/modules/run\_main:81:12)  
at node:internal/main/run\_main\_module:22:47 {  
 code: 'MODULE\_NOT\_FOUND',  
 requireStack: []  
} harshali15@Harshalis-Air final % node 11-methods.js  
Server is listening on port 5000....

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There is certain business in the code  
so we use router

```
const router = express.Router()
```

```
... js      JS logger.js      JS data.js      <> index.html .../navbar-app      <> javascript.html      <> index.h
02-express-tutorial > final > JS 12-router-app.js > ...
1  const express = require('express')
2  const app = express()
3
4  const people = require('./routes/people')
5  const auth = require('./routes/auth')
6
7  // static assets
8  app.use(express.static('./methods-public'))
9  // parse form data
10 app.use(express.urlencoded({ extended: false }))
11 // parse json
12 app.use(express.json())
13
14 app.use('/api/people', people)
15 app.use('/login', auth)
16
17 app.listen(5000, () => {
18   | console.log('Server is listening on port 5000....')
19 })
20
```

I

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

```
Error: Cannot find module '/Users/harshali15/Desktop/node-express-course/02-express-tutorial/final/methods.js'
  at Function.Module._resolveFilename (node:internal/modules/cjs/loader:985:15)
  at Function.Module._load (node:internal/modules/cjs/loader:833:27)
  at Function.executeUserEntryPoint [as runMain] (node:internal/modules/run_main:81:12)
  at node:internal/main/run_main_module:22:47 {
    code: 'MODULE_NOT_FOUND',
    requireStack: []
}
harshali15@Harshalis-Air final % node 11-methods.js
Server is listening on port 5000....
```

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... js JS logger.js JS data.js < index.html .../navbar-app < javascript.html < index.htm

RSE 02-express-tutorial > final > JS 13-router-people.js > ...

```
1 const express = require('express')
2 const router = express.Router()
3
4 const {
5     getPeople,
6     createPerson,
7     createPersonPostman,
8     updatePerson,
9     deletePerson,
10 } = require('../controllers/people')
11
12 // router.get('/', getPeople)
13 // router.post('/', createPerson)
14 // router.post('/postman', createPersonPostman)
15 // router.put('/:id', updatePerson)
16 // router.delete('/:id', deletePerson)
17
18 router.route('/').get(getPeople).post(createPerson)
19 router.route('/postman').post(createPersonPostman)
20 router.route('/:id').put(updatePerson).delete(deletePerson)
21
22 module.exports = router
23
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

Error: Cannot find module '/Users/harshali15/Desktop/node-express-course/02-express-tutorial/final/methods.js'
at Function.Module.\_resolveFilename (node:internal/modules/cjs/loader:985:15)
at Function.Module.\_load (node:internal/modules/cjs/loader:833:27)
at Function.executeUserEntryPoint [as runMain] (node:internal/modules/run\_main:81:12)
at node:internal/main/run\_main\_module:22:47 {
 code: 'MODULE\_NOT\_FOUND',
 requireStack: []
}
○ harshali15@Harshalis-Air final % node 11-methods.js
Server is listening on port 5000....

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ESS-COURSE

... js JS logger.js JS data.js <> index.html .../navbar-app <> javascript.html <> index.html .../methods.js

02-express-tutorial > final > JS 14-router-auth.js > ...

```
1 const express = require('express')
2 const router = express.Router()
3
4 router.post('/', (req, res) => {
5   const { name } = req.body
6   if (name) {
7     return res.status(200).send(`Welcome ${name}`)
8   }
9
10  res.status(401).send('Please Provide Credentials')
11 })
12
13 module.exports = router
14
```

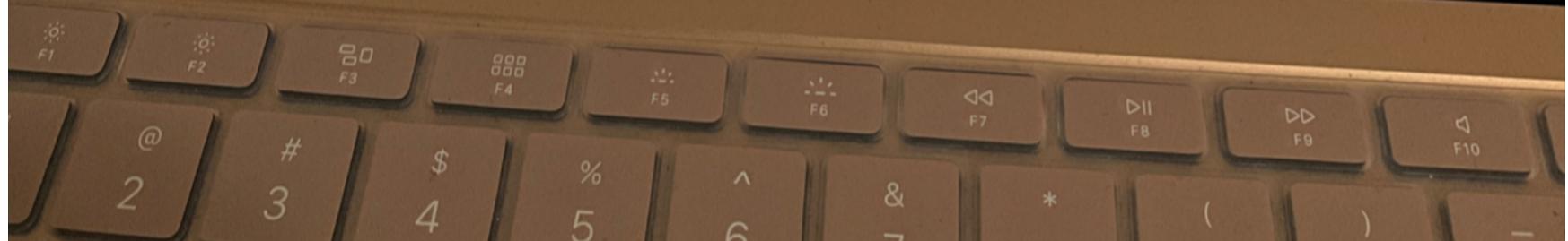
svg  
s.css  
p-basics.js  
tp-app.js  
press-basics.js  
tpress-app.js  
l-static.js  
asic-json.js  
arams-query.js  
iddleware-basic.js  
iddleware-use.js  
iddleware-options.js  
ETHODS.js  
outer-app.js  
outer-people.js  
outer-auth.js  
outer-controller.js  
orize.js  
a.js  
ger.js  
ods-public  
ex.html  
ascript.html  
ormalize.css  
yles.css  
e\_modules  
lic  
ignore  
o.js  
a.js  
ckage-lock.json  
ckage.json  
task-manager  
store-api  
JWT-Basics  
-jobs-api  
INE  
LINE

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

Error: Cannot find module '/Users/harshali15/Desktop/node-express-course/02-express-tutorial/final/methods.js'  
at Function.Module.\_resolveFilename (node:internal/modules/cjs/loader:985:15)  
at Function.Module.\_load (node:internal/modules/cjs/loader:933:27)  
at Function.executeUserEntryPoint [as runMain] (node:internal/modules/run\_main:81:12)  
at node:internal/main/run\_main\_module:22:47 {  
 code: 'MODULE\_NOT\_FOUND',  
 requireStack: []  
}  
harshali15@Harshalis-Air final % node 11-methods.js  
Server is listening on port 5000....

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... js JS logger.js JS data.js < index.html .../navbar-app < javascript.html < index.html .../methods-

02-express-tutorial > final > JS 15-router-controller.js > ...

```
1 let { people } = require('../data')
2
3 const getPeople = (req, res) => {
4   res.status(200).json({ success: true, data: people })
5 }
6
7 const createPerson = (req, res) => {
8   const { name } = req.body
9   if (!name) {
10     return res
11       .status(400)
12       .json({ success: false, msg: 'please provide name value' })
13   }
14   res.status(201).send({ success: true, person: name })
15 }
16
17 const createPersonPostman = (req, res) => {
18   const { name } = req.body
19   if (!name) {
20     return res
21       .status(400)
22       .json({ success: false, msg: 'please provide name value' })
23   }
24   res.status(201).send({ success: true, data: [...people, name] })
25 }
26
27 const updatePerson = (req, res) => {
28   const { id } = req.params
29   const { name } = req.body
30
31   const person = people.find((person) => person.id === Number(id))
32   if (!person) {
33     return res
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

Error: Cannot find module '/Users/harshali15/Desktop/node-express-course/02-express-tutorial/final/methods.js'  
at Function.Module.\_resolveFilename (node:internal/modules/cjs/loader:985:15)  
at Function.Module.\_load (node:internal/modules/cjs/loader:833:27)  
at Function.executeUserEntryPoint [as runMain] (node:internal/modules/run\_main:81:12)  
at node:internal/main/run\_main\_module:22:47 {  
 code: 'MODULE\_NOT\_FOUND',  
 requireStack: []  
}

harshali15@Harshalis-Air final % node 11-methods.js  
Server is listening on port 5000....

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```
... js      JS logger.js      JS data.js      <> index.html .../navbar-app      <> javascript.html      <> index.html .../methods-public
[+] 02-express-tutorial > final > JS 15-router-controller.js > ...
js
js
sic.js
e.js
tions.js
er.js
34     return res
35         .status(404)
36         .json({ success: false, msg: `no person with id ${id}` })
37     }
38     const newPeople = people.map((person) => {
39         if (person.id === Number(id)) {
40             person.name = name
41         }
42         return person
43     })
44     res.status(200).json({ success: true, data: newPeople })
45 }
46
47 const deletePerson = (req, res) => {
48     const person = people.find((person) => person.id === Number(req.params.id))
49     if (!person) {
50         return res
51             .status(404)
52             .json({ success: false, msg: `no person with id ${req.params.id}` })
53     }
54     const newPeople = people.filter(
55         (person) => person.id !== Number(req.params.id)
56     )
57     return res.status(200).json({ success: true, data: newPeople })
58 }
59
60 module.exports = {
61     getPeople,
62     createPerson,
63     createPersonPostman,
64     updatePerson,
65     deletePerson,
66 }
67
PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL
Error: Cannot find module '/Users/harshali15/Desktop/node-express-course/02-express-tutorial/final/methods.js'
  at Function.Module._resolveFilename (node:internal/modules/cjs/loader:985:15)
  at Function.Module._load (node:internal/modules/cjs/loader:833:27)
  at Function.executeUserEntryPoint [as runMain] (node:internal/modules/run_main:81:12)
  at node:internal/main/run_main_module:22:47 {
    code: 'MODULE_NOT_FOUND',
    requireStack: []
}
harshali15@Harshalis-Air final % node 11-methods.js
Server is listening on port 5000....
```

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