

The Complete Guide to Node.js

Joshua Johanan

Section 2

Using the Node.js Module System



In this Section, we are going to take a look at...

- Learn about require()
- How to export modules
- Create our own module
- package.json
- npm run

The Complete Guide to Node.js

Joshua Johanan

Video 2.1

`require()`



In this Video, we are going to take a look at...

- What does require do
- Different ways modules are loaded
- Exceptions to the rules

Section 2, Lecture 6 Edit View Profiles Toolbelt Window Help

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file_require.js — /Users/jjohanan/projects/node.js

node.js

- Section1
- Section2
 - Section2.1
 - node_modules
 - http
 - lodash
 - our_module
 - our_directory
 - index.js
 - file_require.js
 - Section2.2
 - Section2.3
 - Section2.4
 - Section2.5
 - Section2.6
 - .DS_Store

Section3

Volume2

.DS_Store

file_require.js

```
1 module.exports = 'I am a file';
2
```

1. node

```
Joshuas-Mini:Section2.1 jjohanan$ node
> var os = require('os');
undefined
> os
```

[PACKT] VIDEO

file_require.js — /Users/johanan/projects/node.js

```
node.js
  file_require.js
    1 module.exports = 'I am a file';
    2
```

node.js

- Section1
- Section2
 - Section2.1
 - node_modules
 - http
 - lodash
 - our_module
 - our_directory
 - index.js
 - file_require.js
 - Section2.2
 - Section2.3
 - Section2.4
 - Section2.5
 - Section2.6
 - .DS_Store

Section3

Volume2

.DS_Store

1. node

```
SIGTERM: 15,
SIGCHLD: 20,
SIGCONT: 19,
SIGSTOP: 17,
SIGTSTP: 18,
SIGTTIN: 21,
SIGTTOU: 22,
SIGURG: 16,
SIGXCPU: 24,
SIGXFSZ: 25,
SIGVTALRM: 26,
SIGPROF: 27,
SIGWINCH: 28,
SIGIO: 23,
SIGINFO: 29,
SIGSYS: 12 } },  
arch: [Function],  
platform: [Function],  
tmpdir: [Function],  
tmpDir: [Function],  
getNetworkInterfaces: [Function: deprecated],  
EOL: '\n',  
endianness: [Function] }
```

file_require.js — /Users/johanan/projects/node.js

```
node.js
  file_require.js
    1 module.exports = 'I am a file';
    2
```

Section1

Section2

Section2.1

node_modules

http

lodash

our_module

our_directory

index.js

file_require.js

Section2.2

Section2.3

Section2.4

Section2.5

Section2.6

.DS_Store

Section3

Volume2

.DS_Store

1. node

```
SIGINFO: 29,
SIGSYS: 12 } },
arch: [Function],
platform: [Function],
tmpdir: [Function],
tmpDir: [Function],
getNetworkInterfaces: [Function: deprecated],
EOL: '\n',
endianness: [Function] }
> var file = require('file_require')
Error: Cannot find module 'file_require'
  at Function.Module._resolveFilename (module.js:440
:15)
    at Function.Module._load (module.js:388:25)
    at Module.require (module.js:468:17)
    at require (internal/module.js:20:19)
    at repl:1:12
    at sigintHandlersWrap (vm.js:32:31)
    at sigintHandlersWrap (vm.js:96:12)
    at ContextifyScript.Script.runInContext (vm.js:31:
12)
    at REPLServer.defaultEval (repl.js:308:29)
    at bound (domain.js:280:14)
> |
```

file_require.js — /Users/johanan/projects/node.js

```
node.js
  file_require.js
    1 module.exports = 'I am a file';
    2
```

Section1

Section2

Section2.1

node_modules

http

lodash

our_module

our_directory

index.js

file_require.js

Section2.2

Section2.3

Section2.4

Section2.5

Section2.6

.DS_Store

Section3

Volume2

.DS_Store

1. node

```
arch: [Function],
platform: [Function],
tmpdir: [Function],
tmpDir: [Function],
getNetworkInterfaces: [Function: deprecated],
EOL: '\n',
endianness: [Function] }
> var file = require('file_require')
Error: Cannot find module 'file_require'
  at Function.Module._resolveFilename (module.js:440
:15)
  at Function.Module._load (module.js:388:25)
  at Module.require (module.js:468:17)
  at require (internal/module.js:20:19)
  at repl:1:12
  at sigintHandlersWrap (vm.js:32:31)
  at sigintHandlersWrap (vm.js:96:12)
  at ContextifyScript.Script.runInContext (vm.js:31:
12)
  at REPLServer.defaultEval (repl.js:308:29)
  at bound (domain.js:280:14)
> var file = require('./file_require')
undefined
> [PACKT] VIDEO
```

file_require.js — /Users/johanan/projects/node.js

```
node.js
  file_require.js
    1 module.exports = 'I am a file';
    2
```

node_modules
 http
 lodash
 our_module

our_directory
 index.js

file_require.js

Section2.2
 Section2.3
 Section2.4
 Section2.5
 Section2.6
 .DS_Store

Section3
 Volume2
 .DS_Store

1. node

```
tmpdir: [Function],
tmpDir: [Function],
getNetworkInterfaces: [Function: deprecated],
EOL: '\n',
endianness: [Function] }
> var file = require('file_require')
Error: Cannot find module 'file_require'
  at Function.Module._resolveFilename (module.js:440
:15)
  at Function.Module._load (module.js:388:25)
  at Module.require (module.js:468:17)
  at require (internal/module.js:20:19)
  at repl:1:12
  at sigintHandlersWrap (vm.js:32:31)
  at sigintHandlersWrap (vm.js:96:12)
  at ContextifyScript.Script.runInContext (vm.js:31:
12)
  at REPLServer.defaultEval (repl.js:308:29)
  at bound (domain.js:280:14)
> var file = require('./file_require')
undefined
> file
'I am a file'
>
```

file_require.js — /Users/johanan/projects/node.js

```
node.js
  file_require.js
    1 module.exports = 'I am a file';
    2
```

1. node

```
endianness: [Function] }
> var file = require('file_require')
Error: Cannot find module 'file_require'
  at Function.Module._resolveFilename (module.js:440
:15)
  at Function.Module._load (module.js:388:25)
  at Module.require (module.js:468:17)
  at require (internal/module.js:20:19)
  at repl:1:12
  at sigintHandlersWrap (vm.js:32:31)
  at sigintHandlersWrap (vm.js:96:12)
  at ContextifyScript.Script.runInContext (vm.js:31:
12)
  at REPLServer.defaultEval (repl.js:308:29)
  at bound (domain.js:280:14)
> var file = require('./file_require')
undefined
> file
'I am a file'
> var file = require('./file_require.js')
undefined
> file
'I am a file'
>
```

file_require.js — /Users/johanan/projects/node.js

```
node.js
  file_require.js
    1 module.exports = 'I am a file';
    2
  Section1
  Section2
    Section2.1
      node_modules
        http
        lodash
        our_module
    our_directory
      index.js
      file_require.js
    Section2.2
    Section2.3
    Section2.4
    Section2.5
    Section2.6
    .DS_Store
  Section3
  Volume2
  .DS_Store
```

1. node

```
'I am a file'
> var dir = require('our_directory')
Error: Cannot find module 'our_directory'
  at Function.Module._resolveFilename (module.js:440
:15)
  at Function.Module._load (module.js:388:25)
  at Module.require (module.js:468:17)
  at require (internal/module.js:20:19)
  at repl:1:11
  at sigintHandlersWrap (vm.js:32:31)
  at sigintHandlersWrap (vm.js:96:12)
  at ContextifyScript.Script.runInContext (vm.js:31:
12)
  at REPLServer.defaultEval (repl.js:308:29)
  at bound (domain.js:280:14)
> var dir = require('./our_directory')
undefined
> dir
'I am a directory'
> var dir = require('./our_directory/index.js')
undefined
> dir
'I am a directory'
>
```

file_require.js — /Users/johanan/projects/node.js

```
node.js
  file_require.js
    1 module.exports = 'I am a file';
    2

  node_modules
    http
    lodash
    our_module

  our_directory
    index.js
    file_require.js

  Section2.1
  Section2.2
  Section2.3
  Section2.4
  Section2.5
  Section2.6
  .DS_Store

  Section3
  Volume2
  .DS_Store
```

1. node

```
Error: Cannot find module 'our_directory'
      at Function.Module._resolveFilename (module.js:440
:15)
      at Function.Module._load (module.js:388:25)
      at Module.require (module.js:468:17)
      at require (internal/module.js:20:19)
      at repl:1:11
      at sigintHandlersWrap (vm.js:32:31)
      at sigintHandlersWrap (vm.js:96:12)
      at ContextifyScript.Script.runInContext (vm.js:31:
12)
      at REPLServer.defaultEval (repl.js:308:29)
      at bound (domain.js:280:14)
> var dir = require('./our_directory')
undefined
> dir
'I am a directory'
> var dir = require('./our_directory/index.js')
undefined
> dir
'I am a directory'
> var lodash = require('lodash')
undefined
> 
```

Section 2, Lecture 6 Edit View Profiles Toolbelt Window Help

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file_require.js — /Users/johanan/projects/node.js

node.js

Section1

Section2

Section2.1

node_modules

http

lodash

our_module

our_directory

index.js

file_require.js

Section2.2

Section2.3

Section2.4

Section2.5

Section2.6

.DS_Store

Section3

Volume2

.DS_Store

file_require.js

1 module.exports = 'I am a file';
2

1. node

```
template: [Function: template],
times: [Function: times],
toFinite: [Function: toFinite],
toInteger: [Function: toInteger],
toLength: [Function: toLength],
toLowerCase: [Function: toLower],
toNumber: [Function: toNumber],
toSafeInteger: [Function: toSafeInteger],
toString: [Function: toString],
toUpperCase: [Function: toUpper],
trim: [Function: trim],
trimEnd: [Function: trimEnd],
trimStart: [Function: trimStart],
truncate: [Function: truncate],
unescape: [Function: unescape],
uniqueId: [Function: uniqueId],
upperCase: [Function],
upperFirst: [Function],
each: [Function: forEach],
eachRight: [Function: forEachRight],
first: [Function: head],
VERSION: '4.13.1',
__: [Circular] }
```

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Index.js — /Users/jjohanan/projects/node.js

```
node.js
  index.js
    1 module.exports = 'I am http';
    2
```

node.js

- > Section1
- > Section2
 - > Section2.1
 - > node_modules
 - > http
 - index.js
 - > lodash
 - > our_module
 - > our_directory
 - index.js
 - file_require.js
 - > Section2.2
 - > Section2.3
 - > Section2.4
 - > Section2.5
 - > Section2.6
 - .DS_Store

Section3

Volume2

.DS_Store

1. node

```
toFinite: [Function: toFinite],
toInteger: [Function: toInteger],
toLength: [Function: toLength],
toLowerCase: [Function: toLower],
toNumber: [Function: toNumber],
toSafeInteger: [Function: toSafeInteger],
toString: [Function: toString],
toUpperCase: [Function: toUpper],
trim: [Function: trim],
trimEnd: [Function: trimEnd],
trimStart: [Function: trimStart],
truncate: [Function: truncate],
unescape: [Function: unescape],
uniqueId: [Function: uniqueId],
upperCase: [Function],
upperFirst: [Function],
each: [Function: forEach],
eachRight: [Function: forEachRight],
first: [Function: head],
VERSION: '4.13.1',
_< [Circular] }

> var http = require('http')
undefined
>
```

index.js — /Users/jjohanan/projects/node.js

```
node.js
  index.js
    1 module.exports = 'I am http';
    2
```

node.js

- > Section1
- > Section2
 - > Section2.1
 - > node_modules
 - > http
 - index.js
 - > lodash
 - > our_module
 - > our_directory
 - index.js
 - file_require.js
 - > Section2.2
 - > Section2.3
 - > Section2.4
 - > Section2.5
 - > Section2.6
 - > .DS_Store

Section3

Volume2

.DS_Store

1. node

```
_events: { free: [Function] },
_eventsCount: 1,
_maxListeners: undefined,
defaultPort: 80,
protocol: 'http',
options: { path: null },
requests: {},
sockets: {},
freeSockets: {},
keepAliveMsecs: 1000,
keepAlive: false,
maxSockets: Infinity,
maxFreeSockets: 256 },
ClientRequest: { [Function: ClientRequest] super_: {
[Function: OutgoingMessage] super_: [Object] } },
request: [Function],
get: [Function],
_connectionListener: [Function: connectionListener],
Server: { [Function: Server] super_: { [Function: Se
rver] super_: [Object] } },
createServer: [Function],
Client: [Function: deprecated],
createClient: [Function: deprecated] }
```

>

index.js — /Users/jjohanan/projects/node.js

```
node.js
  └── index.js
    1 module.exports = 'I am http';
    2
```

node.js

- > Section1
- Section2
 - Section2.1
 - node_modules
 - http
 - index.js
 - lodash
 - our_module
 - our_directory
 - index.js
 - file_require.js
 - Section2.2
 - Section2.3
 - Section2.4
 - Section2.5
 - Section2.6
 - .DS_Store

> Section3

> Volume2

.DS_Store

Section2/Section2.1/node_modules/http/index.js 1:1

1. node

```
protocol: 'http:',
options: { path: null },
requests: {},
sockets: {},
freeSockets: {},
keepAliveMsecs: 1000,
keepAlive: false,
maxSockets: Infinity,
maxFreeSockets: 256 },
ClientRequest: { [Function: ClientRequest] super_: {
[Function: OutgoingMessage] super_: [Object] } },
request: [Function],
get: [Function],
_connectionListener: [Function: connectionListener],
Server: { [Function: Server] super_: { [Function: Se
rver] super_: [Object] } },
createServer: [Function],
Client: [Function: deprecated],
createClient: [Function: deprecated] }
> var http = require('./http')
undefined
> http
'I am http'
>
```

The Complete Guide to Node.js

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Video 2.2

Module Exports



In this Video, we are going to take a look at...

- Simple export
- Multiple exports
- Function export
- Instance export
- Pass parameters into exports

simple.js — /Users/jjohanan/projects/node.js

```
node.js
  simple.js
    1 module.exports = "simple module.exports";
    2
```

Section1

Section2

Section2.1

Section2.2

- exports.js
- function.js
- multiple.js
- parameter.js
- Point.js
- simple.js

Section2.3

Section2.4

Section2.5

Section2.6

.DS_Store

Section3

Volume2

.DS_Store

1. node

```
Joshuas-Mini:Section2.2 jjohanan$ node
> var s = require('./simple.js')
undefined
> s
'simple module.exports'
>
```

exports.js — /Users/jjohanan/projects/node.js

```
node.js
  exports.js
    1 exports.test = "simple exports";
```

Section1

Section2

Section2.1

Section2.2

- exports.js
- function.js
- multiple.js
- parameter.js
- Point.js
- simple.js

Section2.3

Section2.4

Section2.5

Section2.6

.DS_Store

Section3

Volume2

.DS_Store

1. node

```
Joshuas-Mini:Section2.2 jjohanan$ node
> var s = require('./simple.js')
undefined
> s
'simple module.exports'
> var e = require('./exports.js')
undefined
> e
{ test: 'simple exports' }
> 
```

multiple.js — /Users/jjohanan/projects/node.js

```
node.js
  multiple.js
    1 module.exports.first = 'first export';
    2 module.exports.second = 'second export';
    3 exports.third = 'third export';
    4
```

1. node

```
Joshuas-Mini:Section2.2 jjohanan$ node
> var s = require('./simple.js')
undefined
> s
'simple module.exports'
> var e = require('./exports.js')
undefined
> e
{ test: 'simple exports' }
> var multi = require('./multiple.js')
undefined
> multi
{ first: 'first export',
  second: 'second export',
  third: 'third export' }
>
```

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function.js — /Users/jjohanan/projects/node.js

node.js

- Section1
- Section2
 - Section2.1
 - Section2.2
 - exports.js
 - function.js
 - multiple.js
 - parameter.js
 - Point.js
 - simple.js
 - Section2.3
 - Section2.4
 - Section2.5
 - Section2.6- .DS_Store
- Section3
- Volume2
- .DS_Store

function.js

```
1 var multiple = require('./multiple.js');
2
3 var exportMe = function exportMe(){
4     return 'this is a function';
5 }
6
7 var logToConsole = function logToConsole(message){
8     console.log(message);
9 }
10
11 module.exports.exportMe = exportMe;
12 module.exports.logToConsole = logToConsole;
13 module.exports.first = multiple.first;
14
```

1. node

```
Joshuas-Mini:Section2.2 jjohanan$ node
> var s = require('./simple.js')
undefined
> s
'simple module.exports'
> var e = require('./exports.js')
undefined
> e
{ test: 'simple exports' }
> var multi = require('./multiple.js')
undefined
> multi
{ first: 'first export',
  second: 'second export',
  third: 'third export' }
> var f = require('./function.js')
undefined
> f
{ exportMe: [Function: exportMe],
  logToConsole: [Function: logToConsole],
  first: 'first export' }
> 
```

Section2/Section2.2/function.js 1:1

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Point.js — /Users/jjohanan/projects/node.js

```
Point.js

1 class Point {
2   constructor(x, y){
3     this.x = x;
4     this.y = y;
5   }
6
7   coordinate(){
8     return `${this.x}, ${this.y}`;
9   }
10 }
11
12 module.exports = Point;
```

```
undefined
> f
{ exportMe: [Function: exportMe],
  logToConsole: [Function: logToConsole],
  first: 'first export' }
> f.exportMe()
'this is a function'
> f.first
'first export'
> var Point = require('./Point.js')
undefined
> var p = new Point(1,2)
undefined
> p
Point { x: 1, y: 2 }
> p.coordinate()
'1, 2'
> var p1 = new Point(2,3)
undefined
> p1
Point { x: 2, y: 3 }
> p
Point { x: 1, y: 2 }
> []
```

parameter.js — /Users/jjohanan/projects/node.js

```
node.js
  parameter.js
    1 module.exports = function(name){
    2   var module = {};
    3   module.name = name;
    4
    5   module.sayHi = function sayHi(){
    6     return `Hi ${name}`;
    7   }
    8
    9   return module;
  10 }
  11
```

1. node

```
> var Point = require('./Point.js')
undefined
> var p = new Point(1,2)
undefined
> p
Point { x: 1, y: 2 }
> p.coordinate()
'1, 2'
> var p1 = new Point(2,3)
undefined
> p1
Point { x: 2, y: 3 }
> p
Point { x: 1, y: 2 }
> var josh = require('./parameter.js')('jos
h')
undefined
> josh
{ name: 'josh', sayHi: [Function: sayHi] }
> josh.name
'josh'
> josh.sayHi()
'Hi josh'
>
```

parameter.js — /Users/jjohanan/projects/node.js

```
node.js
parameter.js
1 module.exports = function(name){
2     var module = {};
3     module.name = name;
4
5     module.sayHi = function sayHi(){
6         return 'Hi ${name}';
7     }
8
9     return module;
10}
```

1. node

```
Point { x: 2, y: 3 }
> p
Point { x: 1, y: 2 }
> var josh = require('./parameter.js')('josh')
undefined
> josh
{ name: 'josh', sayHi: [Function: sayHi] }
> josh.name
'josh'
> josh.sayHi()
'Hi josh'
> var brian = require('./parameter.js')('brian')
undefined
> brian
{ name: 'brian', sayHi: [Function: sayHi] }
> brian.name
'brian'
> josh
{ name: 'josh', sayHi: [Function: sayHi] }
> brian
{ name: 'brian', sayHi: [Function: sayHi] }
>
```

The Complete Guide to Node.js

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Video 2.3

Package.json Walkthrough



In this Video, we are going to take a look at...

- What package.json is
- npm init
- Required package.json fields

package.example.json — /Users/jjohanan/projects/node.js

```
node.js
  package.example.json
    1 {  
      "name": "section2.3",  
      "version": "1.0.0",  
      "description": "A test package.",  
      "main": "index.js",  
      "scripts": {  
        "test": "echo \\\"Error: no test specified\\\" && exit  
      },  
      "repository": {  
        "type": "git",  
        "url": "https://github.com/"  
      },  
      "dependencies": {  
      },  
      "devDependencies": {  
      },  
      "engines": { "node": ">5.0.0" },  
      "author": "",  
      "license": "ISC"  
    }  
  
```

1. bash

Joshuas-Mini:Section2.3 jjohanan\$

[PACKT] VIDEO

iTerm2 Shell Edit View Profiles Toolkit Window Help

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package.example.json — /Users/jjohanan/projects/node.js

node.js

Section1

Section2

Section2.1

Section2.2

Section2.3

package.example.json

```
1 {  
2   "name": "section2.3",  
3   "version": "1.0.0",  
4   "description": "A test package.",  
5   "main": "index.js",  
6   "scripts": {  
7     "test": "echo \"Error: no test specified\" && exit  
8   },  
9   "repository": {  
10     "type": "git",  
11     "url": "https://github.com/"  
12   },  
13   "dependencies": {  
14   },  
15   "devDependencies": {  
16   },  
17   "engines": { "node": ">5.0.0" },  
18   "author": "",  
19   "license": "ISC"  
20 }  
21
```

1. node

Joshuas-Mini:Section2.3 jjohanan\$ npm init

This utility will walk you through creating a package.json file.

It only covers the most common items, and tries to guess sensible defaults.

See `npm help json` for definitive documentation on these fields and exactly what they do.

Use `npm install <pkg> --save` afterwards to install a package and save it as a dependency in the package.json file.

Press ^C at any time to quit.

name: (Section2.3)

package.example.json — /Users/jjohanan/projects/node.js

```

node.js
  package.example.json
    1 { "name": "section2.3", "version": "1.0.0", "description": "A test package.", "main": "index.js", "scripts": { "test": "echo \"Error: no test specified\" && exit 1" }, "repository": { "type": "git", "url": "https://github.com/" }, "dependencies": {}, "devDependencies": {}, "engines": { "node": ">5.0.0" }, "author": "", "license": "ISC" }

```

test command:
git repository:
keywords:
author:
license: (ISC)
About to write to /Users/jjohanan/projects/node.js/Section2/Section2.3/package.json:

```

{
  "name": "section2.3",
  "version": "1.0.0",
  "description": "",
  "main": "index.js",
  "scripts": {
    "test": "echo \"Error: no test specified\" && exit 1"
  },
  "author": "",
  "license": "ISC"
}

```

Is this ok? (yes)

Joshuas-Mini:Section2.3 jjohanan\$ [ACKT] ▶

Atom File Edit View Selection Find Packages Window Help

100% 00:02:02 Sat 7:39 PM

package.json — /Users/jjohanan/projects/node.js

node.js

- Section1
- Section2
 - Section2.1
 - Section2.2
 - Section2.3
 - package.example.json
 - package.json
 - Section2.4
 - Section2.5
 - Section2.6
- Section3
- Volume2
- .DS_Store

package.json

```
1 {  
2   "name": "section2.3",  
3   "version": "1.0.0",  
4   "description": "",  
5   "main": "index.js",  
6   "scripts": {  
7     "test": "echo \\\"Error: no test specified\\\" && exit 1"  
8   },  
9   "author": "",  
10  "license": "ISC"  
11}  
12
```

test command:
git repository:
keywords:
author:
license: (ISC)
About to write to /Users/jjohanan/projects/node.js/Section2/Section2.3/package.json:

```
{  
  "name": "section2.3",  
  "version": "1.0.0",  
  "description": "",  
  "main": "index.js",  
  "scripts": {  
    "test": "echo \\\"Error: no test specified\\\" && exit 1"  
  },  
  "author": "",  
  "license": "ISC"  
}
```

Is this ok? (yes)

Joshuas-Mini:Section2.3 jjohanan\$ [PACKT VIDEO]

package.example.json — /Users/jjohanan/projects/node.js

```

node.js
  Section1
  Section2
    Section2.1
    Section2.2
    Section2.3
      package.example.json
      package.json
    Section2.4
    Section2.5
    Section2.6
  Section3
  Volume2
  .DS_Store

```

```

1  {
2    "name": "section2.3",
3    "version": "1.0.0",
4    "description": "A test package.",
5    "main": "index.js",
6    "scripts": {
7      "test": "echo \\\"Error: no test specified\\\" && exit 1"
8    },
9    "repository": {
10      "type": "git",
11      "url": "https://github.com/"
12    },
13    "dependencies": {},
14    "devDependencies": {},
15    "engines": { "node": ">5.0.0" },
16    "author": "",
17    "license": "ISC"
18  }
19
20
21

```

test command:
git repository:
keywords:
author:
license: (ISC)
 About to write to /Users/jjohanan/projects/
 node.js/Section2/Section2.3/package.json:

{
 "name": "section2.3",
 "version": "1.0.0",
 "description": "",
 "main": "index.js",
 "scripts": {
 "test": "echo \\\"Error: no test specified\\\" && exit 1"
 },
 "author": "",
 "license": "ISC"
}

Is this ok? (yes)

Joshuas-Mini:Section2.3 jjohanan\$ [PACKT] ➔

Joshua Johanan

Video 2.4

*Using package.json to
Manage Dependencies*



In this Video, we are going to take a look at...

- npm install
- Dependency versioning
- Adding dependencies to package.json

iTerm2 Shell Edit View Profiles Toolkit Window Help

iShowU HD 00:00:49 Sun 10:09 PM

package.json — /Users/jjohanan/projects/node.js

node.js package.json package.example.json

```
1 {  
2   "name": "section2.4",  
3   "version": "1.0.0",  
4   "description": "",  
5   "main": "index.js",  
6   "scripts": {  
7     "test": "echo \\\"Error: no test specified\\\"",  
8   },  
9   "author": "",  
10  "license": "ISC"  
11 }  
12
```

Joshuas-Mini:Section2.4 jjohanan\$

Section2/Section2.4/package.json 10:19 LF UTF-8 JSON [PACKT] VIDEO

package.json — /Users/jjohanan/projects/node.js

```
node.js
package.json
package.example.json

{
  "name": "section2.4",
  "version": "1.0.0",
  "description": "",
  "main": "index.js",
  "scripts": {
    "test": "echo \\\"Error: no test specified\\\""
  },
  "author": "",
  "license": "ISC"
}
```

1. node

Joshuas-Mini:Section2.4 jjohanan\$ npm install lodash

(redacted) : extract:lodash: sill doPar

package.json — /Users/jjohanan/projects/node.js

node.js
Section1
Section2
Section2.1
Section2.2
Section2.3
Section2.4
node_modules
package.example.json
package.json
Section2.5
Section2.6
Section3
Volume2
.DS_Store

```
1 {  
2   "name": "section2.4",  
3   "version": "1.0.0",  
4   "description": "",  
5   "main": "index.js",  
6   "scripts": {  
7     "test": "echo \\\"Error: no test specified\\\"",  
8   },  
9   "author": "",  
10  "license": "ISC",  
11  "dependencies": {  
12    "lodash": "^4.15.0"  
13  }  
14}  
15
```

LF UTF-8 JSON

1. bash
Joshuas-Mini:Section2.4 jjohanan\$ npm install lodash
section2.4@1.0.0 /Users/jjohanan/projects/node.js/
Section2/Section2.4
--- lodash@4.15.0

npm WARN section2.4@1.0.0 No description
npm WARN section2.4@1.0.0 No repository field.
Joshuas-Mini:Section2.4 jjohanan\$ npm install lodash
--save
section2.4@1.0.0 /Users/jjohanan/projects/node.js/
Section2/Section2.4
--- lodash@4.15.0

npm WARN section2.4@1.0.0 No description
npm WARN section2.4@1.0.0 No repository field.
Joshuas-Mini:Section2.4 jjohanan\$ █

package.example.json — /Users/jjohanan/projects/node.js

```

node.js          package.json  package.example.json
  ▾ Section1
  ▾ Section2
    ▾ Section2.1
    ▾ Section2.2
    ▾ Section2.3
    ▾ Section2.4
      ▾ node_modules
        package.example.json
        package.json
    ▾ Section2.5
    ▾ Section2.6
  ▾ Section3
  ▾ Volume2
  .DS_Store

  "scripts": {
    "test": "echo \"Error: no test specified\""
  },
  "author": "",
  "license": "ISC",
  "dependencies": {
    "lodash": "4.13.1",
    "lodash": ">4.13.1",
    "lodash": ">=4.13.1",
    "lodash": "<4.13.1",
    "lodash": "<=4.13.1",
    "lodash": "~4.13.1",
    "lodash": "^4.13.1",
    "lodash": "4.13.x",
    "lodash": "*",
    "lodash": "git://github.com/lodash/lodash",
    "lodash": "git://github.com/lodash/lodash",
    "lodash": "git://github.com/lodash/lodash",
    "lodash": "file:../path/to/lodash",
    "lodash": "4.13.1",
    "underscore": "1.8.3"
  },
  "devDependencies": {
    "debug": "2.2.0"
  }
}

```

Section2/Section2.4/package.example.json 1:1 LF UTF-8 JSON

Joshuas-Mini:Section2.4 jjohanan\$ npm install lodash
 section2.4@1.0.0 /Users/jjohanan/projects/node.js/
 Section2/Section2.4
 --- lodash@4.15.0

npm WARN section2.4@1.0.0 No description
 npm WARN section2.4@1.0.0 No repository field.
 Joshuas-Mini:Section2.4 jjohanan\$ npm install lodash
 --save
 section2.4@1.0.0 /Users/jjohanan/projects/node.js/
 Section2/Section2.4
 --- lodash@4.15.0

npm WARN section2.4@1.0.0 No description
 npm WARN section2.4@1.0.0 No repository field.
 Joshuas-Mini:Section2.4 jjohanan\$

package.example.json — /Users/jjohanan/projects/node.js

```

node.js          package.json | package.example.json
  +-- Section1
  +-- Section2
    +-- Section2.1
    +-- Section2.2
    +-- Section2.3
    +-- Section2.4
      +-- node_modules
        +-- package.example.json
        +-- package.json
    +-- Section2.5
    +-- Section2.6
  +-- Section3
  +-- Volume2
  .DS_Store

```

```

6  ': {
7    "echo \"Error: no test specified\" && exit
8    '',
9    '',
10   ': "ISC",
11   'cies': {
12     '^": "4.13.1",
13     '^": ">4.13.1",
14     '^": ">=4.13.1",
15     '^": "<4.13.1",
16     '^": "<=4.13.1",
17     '^": "~4.13.1",
18     '^": "^4.13.1",
19     '^": "4.13.x",
20     '^": "*",
21     '^": "git://github.com/lodash/lodash",
22     '^": "git://github.com/lodash/lodash#npm",
23     '^": "git://github.com/lodash/lodash#a9476092"
24     '^": "file:../path/to/lodash",
25     '^": "4.13.1",
26     'core": "1.8.3"
27
28   'dencies': {
29     '^": "2.2.0"
30
31
32

```

Section2/Section2.4/package.example.json 22:50 (1, 3) LF UTM-B JSON

Joshuas-Mini:Section2.4 jjohanan\$ npm install lodash
 section2.4@1.0.0 /Users/jjohanan/projects/node.js/
 Section2/Section2.4
 --- lodash@4.15.0

npm **WARN** section2.4@1.0.0 No description
 npm **WARN** section2.4@1.0.0 No repository field.
 Joshuas-Mini:Section2.4 jjohanan\$ npm install lodash --save
 section2.4@1.0.0 /Users/jjohanan/projects/node.js/
 Section2/Section2.4
 --- lodash@4.15.0

npm **WARN** section2.4@1.0.0 No description
 npm **WARN** section2.4@1.0.0 No repository field.
 Joshuas-Mini:Section2.4 jjohanan\$

package.json — /Users/jjohanan/projects/node.js

node.js
Section1
Section2
Section2.1
Section2.2
Section2.3
Section2.4
node_modules
package.example.json
package.json
Section2.5
Section2.6
Section3
Volume2
.DS_Store

```
1  {  
2      "name": "section2.4",  
3      "version": "1.0.0",  
4      "description": "",  
5      "main": "index.js",  
6      "scripts": {  
7          "test": "echo \\\"Error: no test specified\\\"",  
8      },  
9      "author": "",  
10     "license": "ISC",  
11     "dependencies": {  
12         "lodash": "^4.15.0",  
13         "underscore": "1.8.3"  
14     },  
15     "devDependencies": {  
16         "debug": "2.2.0"  
17     }  
18 }  
19
```

```
Joshuas-Mini:Section2.4 jjohanan$ npm install lodash  
section2.4@1.0.0 /Users/jjohanan/projects/node.js/  
Section2/Section2.4  
  --- lodash@4.15.0  
  
npm WARN section2.4@1.0.0 No description  
npm WARN section2.4@1.0.0 No repository field.  
Joshuas-Mini:Section2.4 jjohanan$ npm install lodash  
--save  
section2.4@1.0.0 /Users/jjohanan/projects/node.js/  
Section2/Section2.4  
  --- lodash@4.15.0  
  
npm WARN section2.4@1.0.0 No description  
npm WARN section2.4@1.0.0 No repository field.  
Joshuas-Mini:Section2.4 jjohanan$ 
```

The screenshot shows a code editor interface with a dark theme. On the left, there is a file tree with the following structure:

- node.js
- Section1
- Section2
 - Section2.1
 - Section2.2
 - Section2.3
 - Section2.4
 - package.example.json
 - package.json
 - Section2.5
 - Section2.6
- Section3
- Volume2
- .DS_Store

The main panel displays the contents of the `package.json` file, which is located in the `Section2/Section2.4` directory. The file contains the following JSON data:

```
{  
  "name": "section2.4",  
  "version": "1.0.0",  
  "description": "",  
  "main": "index.js",  
  "scripts": {  
    "test": "echo \\\"Error: no test specified\\\"",  
  },  
  "author": "",  
  "license": "ISC",  
  "dependencies": {  
    "lodash": "^4.15.0",  
    "underscore": "1.8.3"  
  },  
  "devDependencies": {  
    "debug": "2.2.0"  
  }  
}
```

```
Joshuas-Mini:Section2.4 jjohanan$ npm install lodash
section2.4@1.0.0 /Users/jjohanan/projects/node.js/
Section2/Section2.4
-- lodash@4.15.0

npm WARN section2.4@1.0.0 No description
npm WARN section2.4@1.0.0 No repository field.
Joshuas-Mini:Section2.4 jjohanan$ npm install lodash --save
section2.4@1.0.0 /Users/jjohanan/projects/node.js/
Section2/Section2.4
-- lodash@4.15.0

npm WARN section2.4@1.0.0 No description
npm WARN section2.4@1.0.0 No repository field.
Joshuas-Mini:Section2.4 jjohanan$ npm install
```

package.json — /Users/jjohanan/projects/node.js

```

node.js
  package.json  package.example.json
  Section1
  Section2
    Section2.1
    Section2.2
    Section2.3
    Section2.4
    node_modules
      package.example.json
      package.json
  Section2.5
  Section2.6
  Section3
  Volume2
  .DS_Store

```

```

{
  "name": "section2.4",
  "version": "1.0.0",
  "description": "",
  "main": "index.js",
  "scripts": {
    "test": "echo \"Error: no test specified\" > test.txt"
  },
  "author": "",
  "license": "ISC",
  "dependencies": {
    "lodash": "^4.15.0",
    "underscore": "1.8.3"
  },
  "devDependencies": {
    "debug": "2.2.0"
  }
}

```

1. bash

```

Section2/Section2.4
  --- lodash@4.15.0

npm WARN section2.4@1.0.0 No description
npm WARN section2.4@1.0.0 No repository field.
Joshuas-Mini:Section2.4 jjohanan$ npm install lodash --save
section2.4@1.0.0 /Users/jjohanan/projects/node.js/
Section2/Section2.4
  --- lodash@4.15.0

npm WARN section2.4@1.0.0 No description
npm WARN section2.4@1.0.0 No repository field.
Joshuas-Mini:Section2.4 jjohanan$ npm install section2.4@1.0.0 /Users/jjohanan/projects/node.js/
Section2/Section2.4
  +-- debug@2.2.0
  |   +-- ms@0.7.1
  +-- lodash@4.15.0
  --- underscore@1.8.3

npm WARN section2.4@1.0.0 No description
npm WARN section2.4@1.0.0 No repository field.
Joshuas-Mini:Section2.4 jjohanan$ 

```

package.json — /Users/jjohanan/projects/node.js

```
node.js
  package.json
    package.example.json
      {
        "name": "section2.4",
        "version": "1.0.0",
        "description": "",
        "main": "index.js",
        "scripts": {
          "test": "echo \\\"Error: no test specified\\\""
        },
        "author": "",
        "license": "ISC",
        "dependencies": {
          "lodash": "^4.15.0",
          "underscore": "1.8.3"
        },
        "devDependencies": {
          "debug": "2.2.0"
        }
      }
    .DS_Store
```

Section2/Section2.4
... lodash@4.15.0

npm WARN section2.4@1.0.0 No description
npm WARN section2.4@1.0.0 No repository field.
Joshuas-Mini:Section2.4 jjohanan\$ npm install lodash --save
section2.4@1.0.0 /Users/jjohanan/projects/node.js/
Section2/Section2.4
... lodash@4.15.0

npm WARN section2.4@1.0.0 No description
npm WARN section2.4@1.0.0 No repository field.
Joshuas-Mini:Section2.4 jjohanan\$ npm install section2.4@1.0.0 /Users/jjohanan/projects/node.js/
Section2/Section2.4
 debug@2.2.0
 ... ms@0.7.1
 ... lodash@4.15.0
 underscore@1.8.3

npm WARN section2.4@1.0.0 No description
npm WARN section2.4@1.0.0 No repository field.
Joshuas-Mini:Section2.4 jjohanan\$

package.json — /Users/jjohanan/projects/node.js

```

node.js
  package.json
  package.example.json
    {
      "name": "section2.4",
      "version": "1.0.0",
      "description": "",
      "main": "index.js",
      "scripts": {
        "test": "echo \\\"Error: no test specified\\\""
      },
      "author": "",
      "license": "ISC",
      "dependencies": {
        "lodash": "^4.15.0",
        "underscore": "1.8.3"
      },
      "devDependencies": {
        "debug": "2.2.0"
      }
    }
  
```

1. bash

```

npm WARN section2.4@1.0.0 No description
npm WARN section2.4@1.0.0 No repository field.
Joshuas-Mini:Section2.4 jjohanan$ npm install lodash --save
section2.4@1.0.0 /Users/jjohanan/projects/node.js/
Section2/Section2.4
  --- lodash@4.15.0

npm WARN section2.4@1.0.0 No description
npm WARN section2.4@1.0.0 No repository field.
Joshuas-Mini:Section2.4 jjohanan$ npm install section2.4@1.0.0 /Users/jjohanan/projects/node.js/
Section2/Section2.4
  +-- debug@2.2.0
  |  +-- ms@0.7.1
  +-- lodash@4.15.0
  --- underscore@1.8.3

npm WARN section2.4@1.0.0 No description
npm WARN section2.4@1.0.0 No repository field.
Joshuas-Mini:Section2.4 jjohanan$ npm install --only=production
( [REDACTED] ) : fetchMetadata: sill/MapToRe [REDACTED]
  
```

package.json — /Users/jjohanan/projects/node.js

```

node.js
  package.json
  package.example.json

1  {
2    "name": "section2.4",
3    "version": "1.0.0",
4    "description": "",
5    "main": "index.js",
6    "scripts": {
7      "test": "echo \\\"Error: no test specified\\\""
8    },
9    "author": "",
10   "license": "ISC",
11   "dependencies": {
12     "lodash": "^4.15.0",
13     "underscore": "1.8.3"
14   },
15   "devDependencies": {
16     "debug": "2.2.0"
17   }
18 }
19

```

Section2/Section2.4/package.json 12:25 LF UTF-8 JSON

1. bash

```

... lodash@4.15.0

npm WARN section2.4@1.0.0 No description
npm WARN section2.4@1.0.0 No repository field.
Joshuas-Mini:Section2.4 jjohanan$ npm install
section2.4@1.0.0 /Users/jjohanan/projects/node.js/
Section2/Section2.4
  debug@2.2.0
    ms@0.7.1
  lodash@4.15.0
  underscore@1.8.3

npm WARN section2.4@1.0.0 No description
npm WARN section2.4@1.0.0 No repository field.
Joshuas-Mini:Section2.4 jjohanan$ npm install --only=production
section2.4@1.0.0 /Users/jjohanan/projects/node.js/
Section2/Section2.4
  lodash@4.15.0
  underscore@1.8.3

npm WARN section2.4@1.0.0 No description
npm WARN section2.4@1.0.0 No repository field.
Joshuas-Mini:Section2.4 jjohanan$ [PACKT] VIDEO

```

The Complete Guide to Node.js

Joshua Johanan

Video 2.5

Using npm run



In this Video, we are going to take a look at...

- What npm run is
- The default properties
- Extra hooks
- Custom properties

package.json — /Users/jjohanan/projects/node.js

- node.js
- Section1
- Section2
- Section2.1
- Section2.2
- Section2.3
- Section2.4
- Section2.5
 - node_modules
- package.json
- Section2.6
- Section3
- Volume2
- .DS_Store

```
1  {
2      "name": "section2.5",
3      "version": "1.0.0",
4      "description": "",
5      "main": "index.js",
6      "scripts": {
7          "test": "mocha tests",
8          "prestart": "echo \"The prestart script\"",
9          "start": "echo $1",
10         "poststart": "echo \"The poststart script\"",
11         "stop": "echo \"The stop script\"",
12         "restart": "echo \"The restart script\"",
13         "custom": "echo \"The custom script\"",
14         "precustom": "echo \"The precustom script\"",
15         "postcustom": "echo \"The postcustom script\""
16     },
17     "author": "",
18     "license": "ISC",
19     "devDependencies": {
20         "mocha": "^2.5.3"
21     }
22 }
23 }
```

package.json — /Users/jjohanan/projects/node.js

node.js

- Section1
- Section2
- Section2.1
- Section2.2
- Section2.3
- Section2.4
- Section2.5
 - node_module
 - .bin
 - _moch
 - jade
 - mkdirp
 - mocha
 - suppe
 - command
 - debug
 - diff
 - escape-s
 - glob
 - growl
 - inherits
 - jade
 - lru-cache
 - minimatch
 - minimist
 - mkdirp
 - mocha

package.json

```
1  {
2      "name": "section2.5",
3      "version": "1.0.0",
4      "description": "",
5      "main": "index.js",
6      "scripts": {
7          "test": "mocha tests",
8          "prestart": "echo \"The prestart script\"",
9          "start": "echo $1",
10         "poststart": "echo \"The poststart script\"",
11         "stop": "echo \"The stop script\"",
12         "restart": "echo \"The restart script\"",
13         "custom": "echo \"The custom script\"",
14         "precustom": "echo \"The precustom script\"",
15         "postcustom": "echo \"The postcustom script\""
16     },
17     "author": "",
18     "license": "ISC",
19     "devDependencies": {
20         "mocha": "^2.5.3"
21     }
22 }
```

Joshuas-Mini:Section2.5 jjohanan\$

iTerm2 Shell Edit View Profiles Toolbelt Window Help

iShowU HD 00:02:20 Sun 11:02 PM

package.json — /Users/jjohanan/projects/node.js

node.js

- Section1
- Section2
- Section2.1
- Section2.2
- Section2.3
- Section2.4
- Section2.5
 - node_module
 - .bin
 - command
 - debug
 - diff
 - escape-s
 - glob
 - growl
 - inherits
 - jade
 - iru-cache
 - minimatch
 - minimist
 - mkdirp
 - mocha
 - ms
 - sigmund
 - supports-
 - to-iso-str
- package.json

package.json

```
1 {  
2   "name": "section2.5",  
3   "version": "1.0.0",  
4   "description": "",  
5   "main": "index.js",  
6   "scripts": {  
7     "test": "mocha tests",  
8     "prestart": "echo \"The prestart script\"",  
9     "start": "echo $1",  
10    "poststart": "echo \"The poststart script\"",  
11    "stop": "echo \"The stop script\"",  
12    "restart": "echo \"The restart script\"",  
13    "custom": "echo \"The custom script\"",  
14    "precustom": "echo \"The precustom script\"",  
15    "postcustom": "echo \"The postcustom script\""  
16  },  
17  "author": "",  
18  "license": "ISC",  
19  "devDependencies": {  
20    "mocha": "^2.5.3"  
21  }  
22}  
23
```

1. bash

Joshuas-Mini:Section2.5 jjohanan\$ npm test

Section2/Section2.5/package.json 20:11 (1, 5) LF UTF-8 JSON [PACKT] VIDEO

package.json — /Users/jjohanan/projects/node.js

```

node.js
  package.json
    1 {
    2   "name": "section2.5",
    3   "version": "1.0.0",
    4   "description": "",
    5   "main": "index.js",
    6   "scripts": {
    7     "test": "mocha tests",
    8     "prestart": "echo \"The prestart script\"",
    9     "start": "echo $1",
   10    "poststart": "echo \"The poststart script\"",
   11    "stop": "echo \"The stop script\"",
   12    "restart": "echo \"The restart script\"",
   13    "custom": "echo \"The custom script\"",
   14    "precustom": "echo \"The precustom script\"",
   15    "postcustom": "echo \"The postcustom script\""
   16  },
   17  "author": "",
   18  "license": "ISC",
   19  "devDependencies": {
   20    "mocha": "^2.5.3"
   21  }
   22}
  ms
  mocha
  supports-
  to-iso-str
  package.json

```

```

1. bash
  at Object.lookupFiles (/Users/jjohanan/
  projects/node.js/Section2/Section2.5/node_m
  odules/mocha/lib/utils.js:634:15)
  at /Users/jjohanan/projects/node.js/Sec
  tion2/Section2.5/node_modules/mocha/bin/_mo
  cha:327:30
  at Array.forEach (native)
  at Object.<anonymous> (/Users/jjohanan/
  projects/node.js/Section2/Section2.5/node_m
  odules/mocha/bin/_mocha:326:6)
  at Module._compile (module.js:541:32)
  at Object.Module._extensions..js (modul
  e.js:550:10)
  at Module.load (module.js:458:32)
  at tryModuleLoad (module.js:417:12)
  at Function.Module._load (module.js:409
  :3)
  at Module.runMain (module.js:575:10)
  at run (bootstrap_node.js:352:7)
  at startup (bootstrap_node.js:144:9)
  at bootstrap_node.js:467:3

```

npm **ERR!** Test failed. See above for more d
etails.

Joshuas-Mini:Section2.5 jjohanan\$ [ACKT] ▶

package.json — /Users/jjohanan/projects/node.js

```

node.js
  package.json
    1 { 
    2   "name": "section2.5",
    3   "version": "1.0.0",
    4   "description": "",
    5   "main": "index.js",
    6   "scripts": {
    7     "test": "mocha tests",
    8     "prestart": "echo \"The prestart script\"",
    9     "start": "echo $1",
   10    "poststart": "echo \"The poststart script\"",
   11    "stop": "echo \"The stop script\"",
   12    "restart": "echo \"The restart script\"",
   13    "custom": "echo \"The custom script\"",
   14    "precustom": "echo \"The precustom script\"",
   15    "postcustom": "echo \"The postcustom script\""
   16  },
   17  "author": "",
   18  "license": "ISC",
   19  "devDependencies": {
   20    "mocha": "^2.5.3"
   21  }
}

```

1. bash

at bootstrap_node.js:467:3
 npm **ERR!** Test failed. See above for more details.

Joshuas-Mini:Section2.5 jjohanan\$ npm start
 -- "test this out"

> section2.5@1.0.0 prestart /Users/jjohanan/projects/node.js/Section2/Section2.5
 > echo "The prestart script"

The prestart script

> section2.5@1.0.0 start /Users/jjohanan/projects/node.js/Section2/Section2.5
 > echo \$1 "test this out"

test this out

> section2.5@1.0.0 poststart /Users/jjohanan/projects/node.js/Section2/Section2.5
 > echo "The poststart script"

The poststart script

Joshuas-Mini:Section2.5 jjohanan\$ [ACKT] VIDEO

iTerm2 Shell Edit View Profiles Toolkit Window Help

iShowU HD 00:04:24 Sun 11:04 PM

package.json — /Users/jjohanan/projects/node.js

node.js

- Section1
- Section2
 - Section2.1
 - Section2.2
 - Section2.3
 - Section2.4
 - Section2.5
 - node_modules
 - .bin
 - command
 - debug
 - diff
 - escape-s
 - glob
 - growl
 - inherits
 - jade
 - iru-cache
 - minimatch
 - minimist
 - mkdirp
 - mocha
 - ms
 - sigmund
 - supports-
 - to-iso-str
- package.json

```
1 {  
2   "name": "section2.5",  
3   "version": "1.0.0",  
4   "description": "",  
5   "main": "index.js",  
6   "scripts": {  
7     "test": "mocha tests",  
8     "prestart": "echo \\\"The prestart script\\\"",  
9     "start": "echo $1",  
10    "poststart": "echo \\\"The poststart script\\\"",  
11    "stop": "echo \\\"The stop script\\\"",  
12    "restart": "echo \\\"The restart script\\\"",  
13    "custom": "echo \\\"The custom script\\\"",  
14    "precustom": "echo \\\"The precustom script\\\"",  
15    "postcustom": "echo \\\"The postcustom script\\\""  
16  },  
17  "author": "",  
18  "license": "ISC",  
19  "devDependencies": {  
20    "mocha": "^2.5.3"  
21  }  
22}  
23
```

1. bash

/projects/node.js/Section2/Section2.5
> echo "The prestart script"

The prestart script

> section2.5@1.0.0 start /Users/jjohanan/pr
ojects/node.js/Section2/Section2.5
> echo \$1 "test this out"

test this out

> section2.5@1.0.0 poststart /Users/jjohana
n/projects/node.js/Section2/Section2.5
> echo "The poststart script"

The poststart script

Joshuas-Mini:Section2.5 jjohanan\$ npm stop

> section2.5@1.0.0 stop /Users/jjohanan/pro
jects/node.js/Section2/Section2.5
> echo "The stop script"

The stop script

Joshuas-Mini:Section2.5 jjohanan\$ [nACKT] ▶

Section2/Section2.5/package.json 10:15 (1, 9)

LF UTF-8 JSON

package.json — /Users/jjohanan/projects/node.js

```

node.js
  package.json
    {
      "name": "section2.5",
      "version": "1.0.0",
      "description": "",
      "main": "index.js",
      "scripts": {
        "test": "mocha tests",
        "prestart": "echo \"The prestart script\"",
        "start": "echo $1",
        "poststart": "echo \"The poststart script\"",
        "stop": "echo \"The stop script\"",
        "restart": "echo \"The restart script\"",
        "custom": "echo \"The custom script\"",
        "precustom": "echo \"The precustom script\"",
        "postcustom": "echo \"The postcustom script\""
      },
      "author": "",
      "license": "ISC",
      "devDependencies": {
        "mocha": "^2.5.3"
      }
    }
  
```

Section2/Section2.5/package.json 10:15 (1, 9)

1. bash

```

restart, root, run,
run-script, s, se, search,
set, shrinkwrap, star,
stars, start, stop, t, tag,
team, test, tst, un,
uninstall, unpublish,
unstar, up, update, v,
version, view, whoami

npm <cmd> -h           quick help on <cmd>
npm -l                   display full usage info
npm help <term>          search for help on <term>
npm help npm              involved overview

Specify configs in the ini-formatted file:
  /Users/jjohanan/.npmrc
or on the command line via: npm <command> -
  -key value
Config info can be viewed via: npm help con-
fig

npm@3.10.3 /usr/local/lib/node_modules/npm
Joshuas-Mini:Section2.5 jjohanan$ npm restr

```

[PACKT] VIDEO

iTerm2 Shell Edit View Profiles Toolkit Window Help

iShowU HD 00:04:36 Sun 11:04 PM

package.json — /Users/jjohanan/projects/node.js

node.js

Section1

Section2

Section2.1

Section2.2

Section2.3

Section2.4

Section2.5

node_module

.bin

command

debug

diff

escape-s

glob

growl

inherits

jade

iru-cache

minimatch

minimist

mkdirp

mocha

ms

sigmund

supports-

to-iso-str

package.json

package.json

```

1 {
  "name": "section2.5",
  "version": "1.0.0",
  "description": "",
  "main": "index.js",
  "scripts": {
    "test": "mocha tests",
    "prestart": "echo \"The prestart script\"",
    "start": "echo $1",
    "poststart": "echo \"The poststart script\"",
    "stop": "echo \"The stop script\"",
    "restart": "echo \"The restart script\"",
    "custom": "echo \"The custom script\"",
    "precustom": "echo \"The precustom script\"",
    "postcustom": "echo \"The postcustom script\""
  },
  "author": "",
  "license": "ISC",
  "devDependencies": {
    "mocha": "^2.5.3"
  }
}

```

1. bash

version, view, whoami

npm <cmd> -h quick help on <cmd>

npm -l display full usage info

npm help <term> search for help on <term>

npm help npm involved overview

Specify configs in the ini-formatted file:
 /Users/jjohanan/.npmrc

or on the command line via: npm <command> --key value

Config info can be viewed via: npm help config

npm@3.10.3 /usr/local/lib/node_modules/npm
 Joshuas-Mini:Section2.5 jjohanan\$ npm restart

> section2.5@1.0.0 restart /Users/jjohanan/projects/node.js/Section2/Section2.5
 > echo "The restart script"

The restart script

Joshuas-Mini:Section2.5 jjohanan\$ [ACKT] ▶

Section2/Section2.5/package.json 10:15 (1,9)

LF UTF-8 JSON

iTerm2 Shell Edit View Profiles Toolkit Window Help

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package.json — /Users/jjohanan/projects/node.js

node.js

- Section1
- Section2
 - Section2.1
 - Section2.2
 - Section2.3
 - Section2.4
- Section2.5
 - node_modules
 - .bin
 - command
 - debug
 - diff
 - escape-s
 - glob
 - growl
 - inherits
 - jade
 - iru-cache
 - minimatch
 - minimist
 - mkdirp
 - mocha
 - ms
 - sigmund
 - supports-
 - to-iso-str
 - package.json

```
1 {  
2   "name": "section2.5",  
3   "version": "1.0.0",  
4   "description": "",  
5   "main": "index.js",  
6   "scripts": {  
7     "test": "mocha tests",  
8     "prestart": "echo \"The prestart script\"",  
9     "start": "echo $1",  
10    "poststart": "echo \"The poststart script\"",  
11    "stop": "echo \"The stop script\"",  
12    "restart": "echo \"The restart script\"",  
13    "custom": "echo \"The custom script\"",  
14    "precustom": "echo \"The precustom script\"",  
15    "postcustom": "echo \"The postcustom script\""  
16  },  
17  "author": "",  
18  "license": "ISC",  
19  "devDependencies": {  
20    "mocha": "^2.5.3"  
21  }  
22}  
23}
```

1. bash

> echo "The restart script"

The restart script
Joshuas-Mini:Section2.5 jjohanan\$ npm run c
ustom

> section2.5@1.0.0 precustom /Users/jjohana
n/projects/node.js/Section2/Section2.5
> echo "The precustom script"

The precustom script

> section2.5@1.0.0 custom /Users/jjohanan/p
rojects/node.js/Section2/Section2.5
> echo "The custom script"

The custom script

> section2.5@1.0.0 postcustom /Users/jjohan
an/projects/node.js/Section2/Section2.5
> echo "The postcustom script"

The postcustom script
Joshuas-Mini:Section2.5 jjohanan\$ [PACKT] ▶

The Complete Guide to Node.js

Joshua Johanan

Video 2.6

Creating Our Own Package



In this Video, we are going to take a look at...

- Building a complete module
- Installing required modules
- Tests for the module

package.json — /Users/jjohanan/projects/node.js

node.js

- Section1
- Section2
- Section2.1
- Section2.2
- Section2.3
- Section2.4
- Section2.5
- Section2.6
- node_modules
- tests
- add.js
- math.js
- package.json
- subtract.js

Section3

Volume2

.DS_Store

package.json

```
1  {
2      "name": "packt-math",
3      "version": "1.0.0",
4      "description": "Simple math library.",
5      "main": "math.js",
6      "scripts": {
7          "test": "mocha tests"
8      },
9      "author": "",
10     "license": "ISC",
11     "devDependencies": {
12         "mocha": "2.5.3"
13     },
14     "dependencies": {
15         "mathjs": "3.3.0"
16     }
17 }
18 }
```

Section2/Section2.6/package.json 1:1

LF UTF-8 JSON

1. bash

Joshuas-Mini:Section2.6 jjohanan\$

[PACKT] VIDEO

add.js — /Users/jjohanan/projects/node.js

node.js

- Section1
- Section2
- Section2.1
- Section2.2
- Section2.3
- Section2.4
- Section2.5
- Section2.6
- node_modules
- tests

add.js

```
1 module.exports = add;
2
3 function add(x, y){
4     return x + y;
5 }
6
```

math.js

package.json

subtract.js

Section3

Volume2

.DS_Store

Section2/Section2.6/add.js 1:1

LF UTF-8 JavaScript

1. bash

Joshuas-Mini:Section2.6 jjohanan\$

[PACKT] VIDEO

subtract.js — /Users/jjohanan/projects/node.js

node.js

- Section1
- Section2
 - Section2.1
 - Section2.2
 - Section2.3
 - Section2.4
 - Section2.5
- Section2.6
 - node_modules
 - tests
 - add.js
 - math.js
 - package.json
 - subtract.js
- Section3
- Volume2
- .DS_Store

subtract.js

```
1 module.exports = subtract;
2
3 function subtract(x, y){
4     return x - y;
5 }
```

1. bash

Joshuas-Mini:Section2.6 jjohanan\$

[PACKT] VIDEO

math.js — /Users/jjohanan/projects/node.js

node.js

- Section1
- Section2
 - Section2.1
 - Section2.2
 - Section2.3
 - Section2.4
 - Section2.5
 - Section2.6
 - node_modules
 - tests
 - add.js
 - math.js
 - package.json
 - subtract.js
- Section3
- Volume2
- .DS_Store

math.js

```
1 var add = require('./add.js'),  
2     subtract = require('./subtract.js'),  
3     math = require('mathjs');  
4  
5 module.exports.add = add;  
6 module.exports.subtract = subtract;  
7 module.exports.pi = math.pi;
```

1. bash

Joshuas-Mini:Section2.6 jjohanan\$

[PACKT] VIDEO

package.json — /Users/jjohanan/projects/node.js

node.js

- Section1
- Section2
 - Section2.1
 - Section2.2
 - Section2.3
 - Section2.4
 - Section2.5
- Section2.6
 - node_modules
 - tests
 - add.js
 - math.js
 - package.json
 - subtract.js
- Section3
- Volume2
- .DS_Store

package.json

```
1  {
2      "name": "packt-math",
3      "version": "1.0.0",
4      "description": "Simple math library.",
5      "main": "math.js",
6      "scripts": {
7          "test": "mocha tests"
8      },
9      "author": "",
10     "license": "ISC",
11     "devDependencies": {
12         "mocha": "2.5.3"
13     },
14     "dependencies": {
15         "mathjs": "3.3.0"
16     }
17 }
18 }
```

1. bash

Joshuas-Mini:Section2.6 jjohanan\$

[PACKT] VIDEO

tests.js — /Users/jjohanan/projects/node.js

node.js

- Section1
- Section2
- Section2.1
- Section2.2
- Section2.3
- Section2.4
- Section2.5
- Section2.6
- node_modules
- tests
- tests.js
- add.js
- math.js
- package.json
- subtract.js

Volume2

.DS_Store

tests.js

```
1 var assert = require('assert'),
    math = require('../math');

2
3
4 describe('math tests', function(){
5     it('should add', function(done){
6         assert.strictEqual(math.add(1, 1), 2);
7         assert.strictEqual(math.add(0, 10), 10);
8         assert.strictEqual(math.add(-1, 1), 0);
9         done();
10    });
11
12    it('should subtract', function(done){
13        assert.strictEqual(math.subtract(1,1), 0);
14        assert.strictEqual(math.subtract(10,5), 5);
15        assert.strictEqual(math.subtract(1,-1), 2);
16        done();
17    });
18 });
19
```

1. bash

Joshuas-Mini:Section2.6 jjohanan\$

[PACKT] VIDEO

package.json — /Users/jjohanan/projects/node.js

```
node.js
  package.json
    1 {  
      2   "name": "packt-math",  
      3   "version": "1.0.0",  
      4   "description": "Simple math library.",  
      5   "main": "math.js",  
      6   "scripts": {  
      7     "test": "mocha tests"  
      8   },  
      9   "author": "",  
     10  "license": "ISC",  
     11  "devDependencies": {  
     12    "mocha": "2.5.3"  
     13  },  
     14  "dependencies": {  
     15    "mathjs": "3.3.0"  
     16  }  
    17}  
  .DS_Store
```

1. bash

Joshuas-Mini:Section2.6 jjohanan\$

[PACKT] VIDEO

iTerm2 Shell Edit View Profiles Toolbelt Window Help

iShowU HD 00:04:31 Sun 11:38 PM

package.json — /Users/jjohanan/projects/node.js

node.js

- Section1
- Section2
 - Section2.1
 - Section2.2
 - Section2.3
 - Section2.4
 - Section2.5
- Section2.6
 - node_modules
 - tests
 - tests.js
 - add.js
 - math.js
 - package.json
 - subtract.js
- Section3
- Volume2
- .DS_Store

package.json

```
1 {  
2   "name": "packt-math",  
3   "version": "1.0.0",  
4   "description": "Simple math library.",  
5   "main": "math.js",  
6   "scripts": {  
7     "test": "mocha tests"  
8   },  
9   "author": "",  
10  "license": "ISC",  
11  "devDependencies": {  
12    "mocha": "2.5.3"  
13  },  
14  "dependencies": {  
15    "mathjs": "3.3.0"  
16  }  
17}  
18}
```

1. bash

Joshuas-Mini:Section2.6 jjohanan\$ npm test

```
> packt-math@1.0.0 test /Users/jjohanan/projects/node.js/Section2/Section2.6  
> mocha tests
```

math tests

- ✓ should add
- ✓ should subtract

2 passing (13ms)

Joshuas-Mini:Section2.6 jjohanan\$

Section2/Section2.6/package.json 1:1

LF UTF-8 JSON

[PACKT] VIDEO

iTerm2 Shell Edit View Profiles Toolbelt Window Help

iShowU HD 00:05:50 Sun 11:39 PM

package.json — /Users/jjohanan/projects/node.js

node.js

- Section1
- Section2
 - Section2.1
 - Section2.2
 - Section2.3
 - Section2.4
 - Section2.5
- Section2.6
 - node_modules
 - tests
 - tests.js
 - add.js
 - math.js
 - package.json
 - subtract.js
- Section3
- Volume2
- .DS_Store

package.json

```
1 {  
2   "name": "packt-math",  
3   "version": "1.0.0",  
4   "description": "Simple math library.",  
5   "main": "math.js",  
6   "scripts": {  
7     "test": "mocha tests"  
8   },  
9   "author": "",  
10  "license": "ISC",  
11  "devDependencies": {  
12    "mocha": "2.5.3"  
13  },  
14  "dependencies": {  
15    "mathjs": "3.3.0"  
16  }  
17}  
18}
```

1. node

Joshuas-Mini:Section2.6 jjohanan\$ npm test

```
> packt-math@1.0.0 test /Users/jjohanan/projects/node.js/Section2/Section2.6  
> mocha tests
```

math tests

- ✓ should add
- ✓ should subtract

2 passing (13ms)

Joshuas-Mini:Section2.6 jjohanan\$ node

```
> var math = require('./math.js')  
undefined  
> math  
{ add: [Function: add],  
  subtract: [Function: subtract],  
  pi: 3.141592653589793 }  
> |
```

[PACKT] VIDEO

package.json — /Users/jjohanan/projects/node.js

```
node.js
  └── package.json
    1  {
    2    "name": "packt-math",
    3    "version": "1.0.0",
    4    "description": "Simple math library.",
    5    "main": "math.js",
    6    "scripts": {
    7      "test": "mocha tests"
    8    },
    9    "author": "",
   10   "license": "ISC",
   11   "devDependencies": {
   12     "mocha": "2.5.3"
   13   },
   14   "dependencies": {
   15     "mathjs": "3.3.0"
   16   }
   17 }
   18 }
```

1. node

math tests

- ✓ should add
- ✓ should subtract

2 passing (13ms)

```
Joshuas-Mini:Section2.6 jjohanan$ node
> var math = require('./math.js')
undefined
> math
{ add: [Function: add],
  subtract: [Function: subtract],
  pi: 3.141592653589793 }
> math.add(3,1)
4
> math.subtract(4,1)
3
> math.pi
3.141592653589793
>
```

Summary

- Learned how require finds modules
- How to export objects
- What was inside a package.json
- How npm run works
- Built a full package