Net Ninja

https://nodejs.org/en —>download latest Features

Go to Cmd to check if **node js** is installed or not?

```
>node -v
v20.3.0

C:\Users\gudiw>node
Welcome to Node.js v20.3.0.
Type ".help" for more information.
> 5+5
10
>
> var name = 'raghava'
undefined
> name
'raghava'
>
(To exit, press Ctrl+C again or Ctrl+D or type .exit)
>
```

This is done in cmd C:\Users\gudiw> C:\Users\gudiw>cd documents C:\Users\gudiw\Documents>cd tuts C:\Users\gudiw\Documents\tuts>mkdir node-crash-course C:\Users\gudiw\Documents\tuts>cd node-crash-course C:\Users\gudiw\Documents\tuts\node-crash-course>code. C:\Users\gudiw\Documents\tuts\node-crash-course> This will open VS code test.js const name = 'ramu'; console.log(name); O/p: ramu **Or** Terminal:

PS C:\Users\gudiw\Documents\tuts\node-crash-course> node test

ramu

Lesson 2

```
Backtick symbol found at b/w esc & tab keys
Shift + key = tilde
Key = backtick
```

test.js

```
const greet = (name) => {
    console.log(`hello, ${name}`);  // Using backticks for template
string
}
greet('raghava');
greet('ramu');
```

O/P:

PS C:\Users\gudiw\Documents\tuts\node-crash-course> node test hello, raghava hello, ramu

Global Object

global.js

```
console.log(global);
```

O/P:

```
PS C:\Users\gudiw\Documents\tuts\node-crash-course> node global <ref *1> Object [global] {
  global: [Circular *1],
  queueMicrotask: [Function: queueMicrotask],
  clearImmediate: [Function: clearImmediate],
```

```
setImmediate: [Function: setImmediate] {
    [Symbol(nodejs.util.promisify.custom)]: [Getter]
},
structuredClone: [Getter/Setter],
clearInterval: [Function: clearInterval],
clearTimeout: [Function: clearTimeout],
setInterval: [Function: setInterval],
setTimeout: [Function: setTimeout] {
    [Symbol(nodejs.util.promisify.custom)]: [Getter]
},
atob: [Getter/Setter],
btoa: [Getter/Setter],
performance: [Getter/Setter],
fetch: [AsyncFunction: fetch],
crypto: [Getter]
```

global.js

→wait for 3sec

```
global.setTimeout(() => {
   console.log('in the timeout');
}, 3000);
```

O/P:

PS C:\Users\gudiw\Documents\tuts\node-crash-course> node global in the timeout

```
setTimeout(() => {
  console.log('in the timeout');
}, 3000);
```

→the above two codes work same

O/P:

PS C:\Users\gudiw\Documents\tuts\node-crash-course> node global in the timeout

The setTimeout() function is called on the global object (global in Node.js or window in a web browser).

- 1. () => { ... }
 - This part of the code defines an arrow function (also known as a lambda function) that serves as the callback function. The arrow function has no parameters.
- 2. 3000
 - The number 3000 represents the delay in milliseconds. It specifies how long the script should wait before executing the callback function. In this case, the delay is 3000 milliseconds, which is equivalent to 3 seconds.

```
setTimeout(() => {
   console.log('in the timeout');
}, 3000);

const int = setInterval(() => {
   console.log('in the interval');
}, 1000);
```

O/P:

PS C:\Users\gudiw\Documents\tuts\node-crash-course> node global

in the interval

in the interval

in the timeout

in the interval

in the interval

```
in the interval
in the interval
in the interval
in the interval
```

→in the above program "the interval function is not stopped"

We have to use clearInterval()

```
setTimeout(() => {
   console.log('in the timeout');
   clearInterval(int);
}, 3000);

const int = setInterval(() => {
   console.log('in the interval');
}, 1000);
```

O/P:

PS C:\Users\gudiw\Documents\tuts\node-crash-course> node global in the interval in the interval in the timeout

O/P:

PS C:\Users\gudiw\Documents\tuts\node-crash-course> **node global** C:\Users\gudiw\Documents\tuts\node-crash-course C:\Users\gudiw\Documents\tuts\node-crash-course\global.js

```
console.log(document.querySelector);
```

→This is available on window object

Modules & Require

modules.js

```
const xyz = require('./people');
console.log(xyz);
console.log(xyz.people, xyz.ages);
```

people.js

```
const people = ['raghava', 'ryu', 'chun-li', 'shreya'];
const ages = [20, 25, 30, 35];

console.log(people);

//module.exports = 'hello';

//module.exports = people; //this will export single thing

module.exports = {
   people, ages
};
```

O/P:

```
PS C:\Users\gudiw\Documents\tuts\node-crash-course> node modules [ 'raghava', 'ryu', 'chun-li', 'shreya' ]

{
    people: [ 'raghava', 'ryu', 'chun-li', 'shreya' ],
    ages: [ 20, 25, 30, 35 ]
```

```
}
[ 'raghava', 'ryu', 'chun-li', 'shreya' ] [ 20, 25, 30, 35 ]
```

→**module.js** written different way also

```
const {people, ages} = require('./people');

//console.log(xyz);

console.log(people, ages);
```

→Both are gives same Output

→extended/ adding some script in **module.js**

```
const {people, ages} = require('./people');
console.log(people, ages);
const os = require('os');
console.log(os);
console.log(os.platform(), os.homedir());
```

O/P:

```
PS C:\Users\gudiw\Documents\tuts\node-crash-course> node modules
[ 'raghava', 'ryu', 'chun-li', 'shreya' ]
[ 'raghava', 'ryu', 'chun-li', 'shreya' ] [ 20, 25, 30, 35 ]
{
    arch: [Function: arch] {
        [Symbol(Symbol.toPrimitive)]: [Function (anonymous)]
    },
    availableParallelism: [Function: getAvailableParallelism] {
```

```
[Symbol(Symbol.toPrimitive)]: [Function (anonymous)]
},
cpus: [Function: cpus],
endianness: [Function: endianness] {
 [Symbol(Symbol.toPrimitive)]: [Function (anonymous)]
},
freemem: [Function: getFreeMem] {
 [Symbol(Symbol.toPrimitive)]: [Function (anonymous)]
getPriority: [Function: getPriority],
homedir: [Function: node internal checkError] {
 [Symbol(Symbol.toPrimitive)]: [Function (anonymous)]
hostname: [Function: node internal checkError] {
 [Symbol(Symbol.toPrimitive)]: [Function (anonymous)]
},
loadavg: [Function: loadavg],
networkInterfaces: [Function: networkInterfaces],
platform: [Function: platform] {
 [Symbol(Symbol.toPrimitive)]: [Function (anonymous)]
},
release: [Function: getOSRelease] {
 [Symbol(Symbol.toPrimitive)]: [Function (anonymous)]
},
setPriority: [Function: setPriority],
tmpdir: [Function: tmpdir] {
 [Symbol(Symbol.toPrimitive)]: [Function (anonymous)]
},
totalmem: [Function: getTotalMem] {
 [Symbol(Symbol.toPrimitive)]: [Function (anonymous)]
},
type: [Function: getOSType] {
 [Symbol(Symbol.toPrimitive)]: [Function (anonymous)]
userInfo: [Function: userInfo],
uptime: [Function: node internal checkError] {
 [Symbol(Symbol.toPrimitive)]: [Function (anonymous)]
version: [Function: getOSVersion] {
 [Symbol(Symbol.toPrimitive)]: [Function (anonymous)]
```

```
},
machine: [Function: getMachine] {
 [Symbol(Symbol.toPrimitive)]: [Function (anonymous)]
},
constants: [Object: null prototype] {
 UV UDP REUSEADDR: 4,
 dlopen: [Object: null prototype] {},
 errno: [Object: null prototype] {
  E2BIG: 7,
  EACCES: 13,
  EADDRINUSE: 100,
  EADDRNOTAVAIL: 101,
  EAFNOSUPPORT: 102,
  EAGAIN: 11,
  EALREADY: 103,
  EBADF: 9,
  EBADMSG: 104,
  EBUSY: 16,
  ECANCELED: 105,
  ECHILD: 10,
  ECONNABORTED: 106,
  ECONNREFUSED: 107,
  ECONNRESET: 108,
  EDEADLK: 36,
  EDESTADDRREQ: 109,
  EDOM: 33,
  EEXIST: 17,
  EFAULT: 14,
  EFBIG: 27,
  EHOSTUNREACH: 110,
  EIDRM: 111,
  EILSEQ: 42,
  EINPROGRESS: 112,
  EINTR: 4,
  EINVAL: 22,
  EIO: 5,
  EISCONN: 113,
  EISDIR: 21,
  ELOOP: 114,
  EMFILE: 24,
```

EMLINK: 31,

EMSGSIZE: 115,

ENAMETOOLONG: 38,

ENETDOWN: 116,

ENETRESET: 117,

ENETUNREACH: 118,

ENFILE: 23,

ENOBUFS: 119,

ENODATA: 120,

ENODEV: 19,

ENOENT: 2,

ENOEXEC: 8,

ENOLCK: 39,

ENOLINK: 121,

ENOMEM: 12,

ENOMSG: 122,

ENOPROTOOPT: 123,

ENOSPC: 28,

ENOSR: 124,

ENOSTR: 125,

ENOSYS: 40,

ENOTCONN: 126,

ENOTDIR: 20,

ENOTEMPTY: 41,

ENOTSOCK: 128,

ENOTSUP: 129,

ENOTTY: 25,

ENXIO: 6,

EOPNOTSUPP: 130,

EOVERFLOW: 132,

EPERM: 1,

EPIPE: 32,

EPROTO: 134,

EPROTONOSUPPORT: 135,

EPROTOTYPE: 136,

ERANGE: 34,

EROFS: 30,

ESPIPE: 29,

ESRCH: 3,

ETIME: 137,

ETIMEDOUT: 138,

ETXTBSY: 139,

EWOULDBLOCK: 140,

EXDEV: 18,

WSAEINTR: 10004,

WSAEBADF: 10009,

WSAEACCES: 10013,

WSAEFAULT: 10014,

WSAEINVAL: 10022,

WSAEMFILE: 10024,

WSAEWOULDBLOCK: 10035,

WSAEINPROGRESS: 10036,

WSAEALREADY: 10037,

WSAENOTSOCK: 10038,

WSAEDESTADDRREQ: 10039,

WSAEMSGSIZE: 10040,

WSAEPROTOTYPE: 10041,

WSAENOPROTOOPT: 10042,

WSAEPROTONOSUPPORT: 10043,

WSAESOCKTNOSUPPORT: 10044,

WSAEOPNOTSUPP: 10045,

WSAEPFNOSUPPORT: 10046,

WSAEAFNOSUPPORT: 10047,

WSAEADDRINUSE: 10048,

WSAEADDRNOTAVAIL: 10049,

WSAENETDOWN: 10050,

WSAENETUNREACH: 10051,

WSAENETRESET: 10052,

WSAECONNABORTED: 10053,

WSAECONNRESET: 10054,

WSAENOBUFS: 10055,

WSAEISCONN: 10056,

WSAENOTCONN: 10057,

WSAESHUTDOWN: 10058,

WSAETOOMANYREFS: 10059,

WSAETIMEDOUT: 10060,

WSAECONNREFUSED: 10061,

WSAELOOP: 10062,

WSAENAMETOOLONG: 10063,

WSAEHOSTDOWN: 10064,

```
WSAEHOSTUNREACH: 10065,
WSAENOTEMPTY: 10066,
 WSAEPROCLIM: 10067,
 WSAEUSERS: 10068,
 WSAEDQUOT: 10069,
 WSAESTALE: 10070,
 WSAEREMOTE: 10071,
 WSASYSNOTREADY: 10091,
 WSAVERNOTSUPPORTED: 10092,
 WSANOTINITIALISED: 10093,
 WSAEDISCON: 10101,
 WSAENOMORE: 10102,
WSAECANCELLED: 10103,
 WSAEINVALIDPROCTABLE: 10104,
 WSAEINVALIDPROVIDER: 10105,
 WSAEPROVIDERFAILEDINIT: 10106,
 WSASYSCALLFAILURE: 10107,
 WSASERVICE NOT FOUND: 10108,
 WSATYPE NOT FOUND: 10109,
 WSA E NO MORE: 10110,
WSA E CANCELLED: 10111,
WSAEREFUSED: 10112
},
signals: [Object: null prototype] {
SIGHUP: 1,
SIGINT: 2,
SIGQUIT: 3,
SIGILL: 4,
SIGABRT: 22,
SIGFPE: 8,
SIGKILL: 9,
SIGSEGV: 11,
SIGTERM: 15,
SIGBREAK: 21,
SIGWINCH: 28
},
priority: [Object: null prototype] {
PRIORITY LOW: 19,
PRIORITY BELOW NORMAL: 10,
PRIORITY NORMAL: 0,
```

```
PRIORITY_ABOVE_NORMAL: -7,
PRIORITY_HIGH: -14,
PRIORITY_HIGHEST: -20
}
},
EOL: '\r\n',
devNull: '\\\\.\\nul'
}
win32 C:\Users\gudiw
```

→The above **bold** one is the output for **console.log(os)**;

The File System

files.js

→create a folder **docs** inside the file **blog1.txt**

 $docs \rightarrow blog1.txt$

O/P:

```
PS C:\Users\gudiw\Documents\tuts\node-crash-course> node files last line <Buffer 68 65 6c 6c 6f 2c 20 6e 69 6e 6a 61 73> hello, ninjas
```

→last line is printing first because **readFile** it will take some to read the data.

Writing the file

```
const fs = require('fs');

// writing files
fs.writeFile('./docs/blog1.txt', 'hello, world', () =>{
    console.log('file was written');
});

fs.writeFile('./docs/blog2.txt', 'hello, again blog2.txt is created automatically', () =>{
    console.log('file was written');
});
```

O/P:

PS C:\Users\gudiw\Documents\tuts\node-crash-course> node files

file was written file was written

→Initially the **blog2.txt file** is not available by using **writeFile** it is created.

Directories

```
const fs = require('fs');

// directories
if(!fs.existsSync('./assets')){
fs.mkdir('./assets', (err) =>{
    if(err){
       console.log(err);
    }
    console.log('folder created');
});
}
else{
    fs.rmdir('./assets', (err) => {
       if(err){
       console.log(err);
    }
}
```

```
console.log('folder deleted');
});
```

O/P:

PS C:\Users\gudiw\Documents\tuts\node-crash-course> node files folder created

PS C:\Users\gudiw\Documents\tuts\node-crash-course> node files folder deleted

PS C:\Users\gudiw\Documents\tuts\node-crash-course> node files folder created

PS C:\Users\gudiw\Documents\tuts\node-crash-course> node files folder deleted

PS C:\Users\gudiw\Documents\tuts\node-crash-course> node files folder created

→If the directory does not exist it will be created, otherwise it will be deleted.

Deleting Files

```
const fs = require('fs');

// deleting files
if(fs.existsSync('./docs/deleteme.txt')){
    fs.unlink('./docs/deleteme.txt', (err) => {
      if(err) {
         console.log(err);
      }
      console.log('file deleted');
      })
}
```

O/P:

PS C:\Users\gudiw\Documents\tuts\node-crash-course> node files

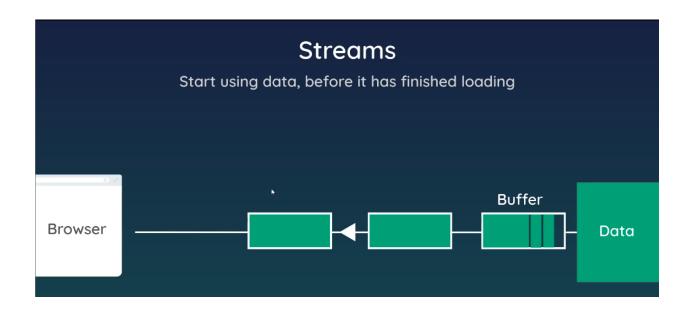
file deleted

PS C:\Users\gudiw\Documents\tuts\node-crash-course>

PS C:\Users\gudiw\Documents\tuts\node-crash-course> node files

→If the file does not exist it won't do anything. Otherwise it will delete the file.

Streams & Buffers



→When large data is available it will take more time to load the data.

```
≣ blog3.txt ×
  1 Lorem ninja ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut lao\epsilon
      Lorem ninja ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laor
     Lorem ninja ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laor
  4 Lorem ninja ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laor
  5 Lorem ninja ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laom
     Lorem ninja ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laor
     Lorem ninja ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laor
  8 Lorem ninja ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laon
     Lorem ninja ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laor
     Lorem ninja ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laor
     Lorem ninja ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laor
 12 Lorem ninja ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laor
     Lorem ninja ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laor
     Lorem ninja ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laor
     Lorem ninja ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laor
 16 Lorem ninja ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laor
      Lorem ninja ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laon
```

stream.js

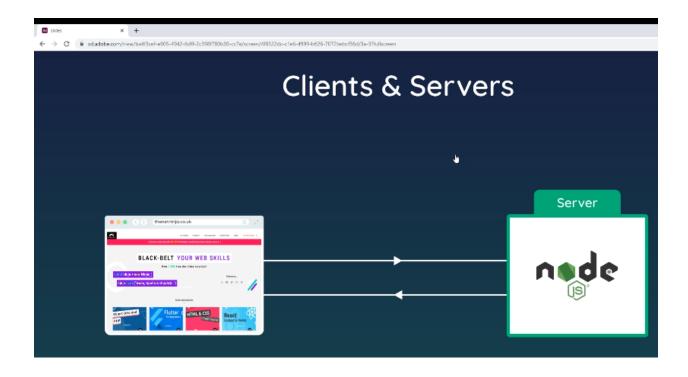
O/P:

blog4.txt is created

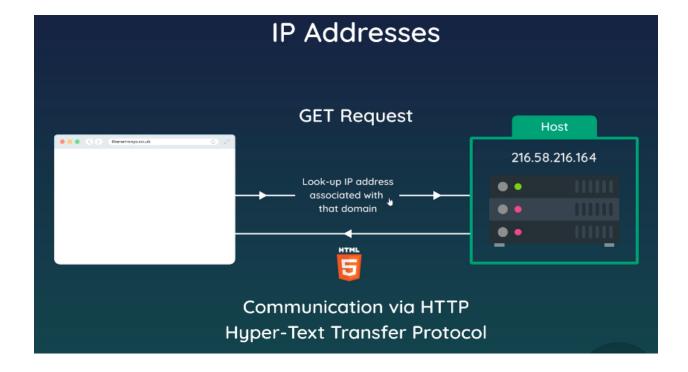
```
≣ blog4.txt ×
docs > ≡ blog4.txt
  1 Lorem ninja ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laor
      Lorem ninja ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laor
      Lorem ninja ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laor
     Lorem ninja ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laor
     Lorem ninja ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laor
      Lorem ninja ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laor
      Lorem ninja ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laor
     Lorem ninja ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laor
      Lorem ninja ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laon
      Lorem ninja ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laor
     Lorem ninja ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laor
    Lorem ninja ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laon
      Lorem ninja ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laor
     Lorem ninja ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laor
    Lorem ninja ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laom
    Lorem ninja ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laom
     Lorem ninja ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laor
```

Lesson 3

Clients & Servers



IP Addresses



Creating a Server server.js

```
const http = require('http');

const server = http.createServer((req, res) =>{
    console.log('request made');
});

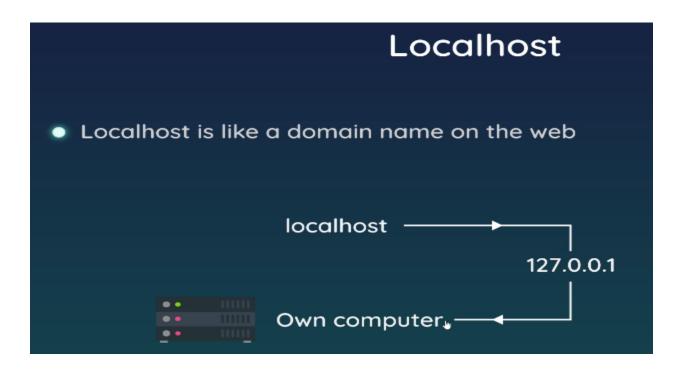
server.listen(3000, 'localhost', () =>{
    console.log('listening for requests on port 3000');
});
```

O/P:

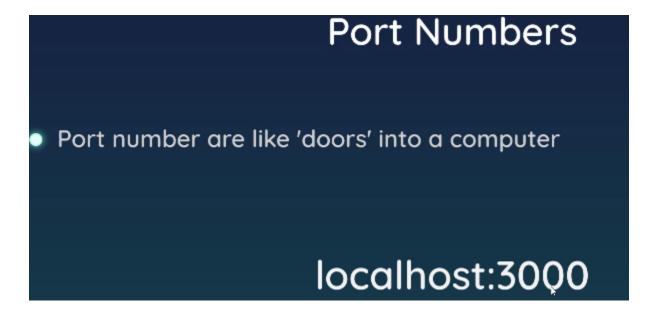
PS C:\Users\gudiw\Documents\tuts\node-crash-course> **node server** listening for requests on port 3000 request made

→Here request made is executed when we type localhost:3000 in browser

LocalHost & Port Numbers



→Here Own computer as "host"



Lesson 4

server.js

```
const http = require('http');

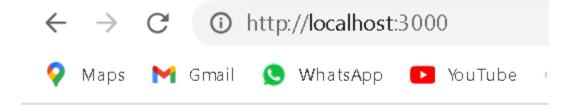
const server = http.createServer((req, res) =>{
    //console.log(req);
    console.log(req.url, req.method);
});

server.listen(3000, 'localhost', () =>{
    console.log('listening for requests on port 3000');
});
```

O/P:

PS C:\Users\gudiw\Documents\tuts\node-crash-course> **node server** listening for requests on port 3000 / GET /about GET

The Response Object



hello, raghava

server.js

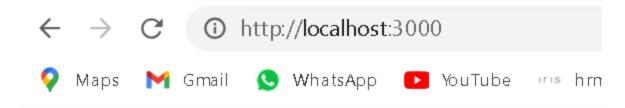
```
const http = require('http');
const server = http.createServer((req, res) =>{
   //console.log(req);
   console.log(req.url, req.method);
   //set header content type
   // res.setHeader('Content-Type', 'text/plain');
   // res.write('hello, raghava');
   res.setHeader('Content-Type', 'text/html');
   res.write('<head><link rel="styleseet" href="#"></head>')
   res.write('hello, raghava');
   res.write('hello, world...');
   res.end();
});
server.listen(3000, 'localhost', () =>{
   console.log('listening for requests on port 3000');
});
```

O/P:

PS C:\Users\gudiw\Documents\tuts\node-crash-course> node server listening for requests on port 3000

/ GET

/favicon.ico GET



hello, raghava

hello, world...

Returning Html Pages

server.js

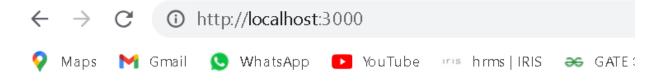
```
const http = require('http');
const fs = require('fs')
const server = http.createServer((req, res) =>{
    console.log(req.url, req.method);
    // set header content type
    res.setHeader('Content-Type', 'text/html');
    // send an html file
    fs.readFile('./views/index.html', (err, data) =>{
     if(err){
        console.log(err);
       res.end();
      } else{
      //res.write(data);
       res.end(data);
    })
});
```

```
server.listen(3000, 'localhost', () =>{
   console.log('listening for requests on port 3000');
});
```

views→idex.html

index.html

O/P:



Home

Your path to becoming a Node.js ninja!

PS C:\Users\gudiw\Documents\tuts\node-crash-course> node server

listening for requests on port 3000 / GET /favicon.ico GET

Basic Routing

server.js

```
const http = require('http');
const fs = require('fs')
const server = http.createServer((req, res) =>{
    console.log(req.url, req.method);
    // set header content type
    res.setHeader('Content-Type', 'text/html');
    let path = './views/';
    switch(req.url) {
       case '/':
            path += 'index.html';
            break;
        case '/about':
            path += 'about.html';
            break;
        default:
            path += '404.html';
           break;
    }
    // send an html file
    fs.readFile(path, (err, data) =>{
     if(err){
       console.log(err);
       res.end();
      } else{
```

```
//res.write(data);
    res.end(data);
}

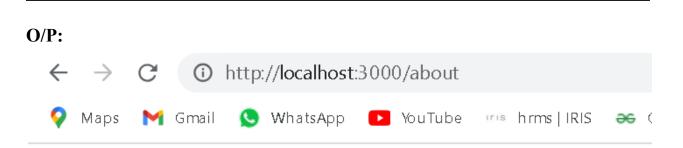
});

server.listen(3000, 'localhost', () =>{
    console.log('listening for requests on port 3000');
});
```

Index.html →already present in above

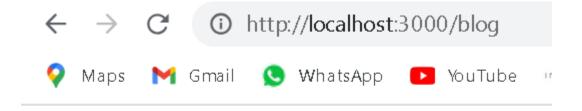
about.html

404.html



About

Your path to becoming a Node.js ninja!



404 - OOPS!

That page does not exist

Status Code

Status Codes

Status codes describe the type of response sent to the browser

200 - OK

301 - Resource moved

404 - Not found

500 - Internal server error

Status Codes

- 100 Range informational responses
- 200 Range success codes
- 300 Range codes for redirects
- 400 Range user or client error codes
- 500 Range server error codes

server.js

```
const http = require('http');
const fs = require('fs')
const server = http.createServer((req, res) =>{
    console.log(req.url, req.method);
    // set header content type
    res.setHeader('Content-Type', 'text/html');
   let path = './views/';
    switch(req.url) {
       case '/':
            path += 'index.html';
            res.statusCode = 200;
            break;
        case '/about':
            path += 'about.html';
            res.statusCode = 200;
            break;
        default:
            path += '404.html';
            res.statusCode = 404 ;
           break;
    }
    // send an html file
    fs.readFile(path, (err, data) =>{
     if(err){
       console.log(err);
       res.end();
      } else{
      //res.write(data);
       res.end(data);
    })
```

```
server.listen(3000, 'localhost', () =>{
   console.log('listening for requests on port 3000');
});
```

Redirects

In the scenario \rightarrow /about-me is redirect to /about

server.js

```
const http = require('http');
const fs = require('fs')
const server = http.createServer((req, res) =>{
    console.log(req.url, req.method);
    // set header content type
    res.setHeader('Content-Type', 'text/html');
    let path = './views/';
    switch(req.url) {
       case '/':
            path += 'index.html';
            res.statusCode = 200;
            break;
        case '/about':
           path += 'about.html';
            res.statusCode = 200;
           break;
        case '/about-me':
            res.statusCode = 301; //resources moved
```

```
res.setHeader('Location', '/about');
            res.end();
            break;
        default:
            path += '404.html';
            res.statusCode = 404 ;
            break;
    // send an html file
    fs.readFile(path, (err, data) =>{
     if(err){
        console.log(err);
       res.end();
      } else{
      //res.write(data);
       res.end(data);
    })
});
server.listen(3000, 'localhost', () =>{
    console.log('listening for requests on port 3000');
});
```

Lesson 5

NPM(Node Package Manager)

→<u>https://www.npmjs.com/</u>

Installing Packages Globally

\rightarrow PS C:\Users\gudiw\Documents\tuts\node-crash-course> npm install -g nodemon

If any change is made in script everytime we need to make restart and run again for that purpose we install **nodemon**

→PS C:\Users\gudiw\Documents\tuts\node-crash-course> **nodemon server** nodemon: File C:\Users\gudiw\AppData\Roaming\npm\nodemon.ps1 cannot be loaded because running scripts is disabled on this system. For more information, see about_Execution_Policies at https://go.microsoft.com/fwlink/?LinkID=135170.

At line:1 char:1

+ nodemon server

+ ~~~~~

+ CategoryInfo : SecurityError: (:) [], PSSecurityException

+ FullyQualifiedErrorId : UnauthorizedAccess

While execution "nodemon server" it is getting then bypass the error

- →PS C:\Users\gudiw\Documents\tuts\node-crash-course> powershell
- -ExecutionPolicy Bypass -Command "nodemon server"

Packages.json File

→The packages required for the project

→PS C:\Users\gudiw\Documents\tuts\node-crash-course> **npm init**

PS C:\Users\gudiw\Documents\tuts\node-crash-course> npm install lodash

→If we install local packages it is present in **node_modules**

server.js

```
const http = require('http');
const fs = require('fs')
const = require('lodash');
const server = http.createServer((req, res) =>{
    //lodash
    const num = _.random(0, 20);
    console.log(num);
    const greet = .once(() => {
       console.log('hello');
    });
    greet();
    greet();
    // set header content type
    res.setHeader('Content-Type', 'text/html');
    let path = './views/';
    switch(req.url) {
        case '/':
           path += 'index.html';
           res.statusCode = 200;
           break;
```

```
case '/about':
            path += 'about.html';
            res.statusCode = 200;
            break;
        case '/about-us':
            res.statusCode = 301; //resources moved
            res.setHeader('Location', '/about');
            res.end();
            break;
        default:
            path += '404.html';
            res.statusCode = 404;
            break;
    }
    // send an html file
    fs.readFile(path, (err, data) =>{
      if(err){
       console.log(err);
       res.end();
      } else{
      //res.write(data);
       res.end(data);
    })
});
server.listen(3000, 'localhost', () =>{
    console.log('listening for requests on port 3000');
});
```

O/P:

PS C:\Users\gudiw\Documents\tuts\node-crash-course> powershell -ExecutionPolicy Bypass -Command "nodemon server" [nodemon] 2.0.22

```
[nodemon] to restart at any time, enter 'rs'
[nodemon] watching path(s): *.*
[nodemon] watching extensions: js,mjs,json
[nodemon] starting `node server.js`
listening for requests on port 3000
[nodemon] restarting due to changes...
[nodemon] starting `node server.js`
listening for requests on port 3000
16
20
3
4
[nodemon] restarting due to changes...
[nodemon] starting `node server.js`
listening for requests on port 3000
17
hello
10
hello
```

\rightarrow hello is only once it is restricted

Dependencies

 \rightarrow if the packages downloaded will be deleted then we are unable to run the code then **npm install** \rightarrow This will give all the required packages.

```
    package.json > ...
    pebug

         "scripts": {
           "test": "echo \"Error:
 10
           "start": "node server.
 11
 12
         "author": "",
 13
         "license": "ISC",
 14
         "dependencies": {
15
           "lodash": "^4.17.21"
16
17
 18
       }
```

Lesson 6

Express Apps

Express is a popular web application framework for Node.js that simplifies the process of building web applications and APIs. It provides a set of robust features and tools that help developers manage various aspects of web development more easily.

PS C:\Users\gudiw\Documents\tuts\node-crash-course> npm install express

Creating an Express APP

express.js

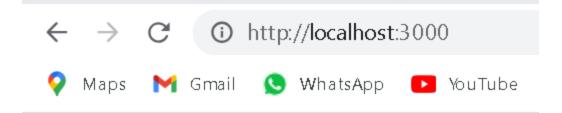
```
const express = require('express');

// express app
const app = express();

// listen for requests
app.listen(3000);

app.get('/', (req, res)=>{
    res.send('home page');
});
```

O/P:



home page

Routing & HTML

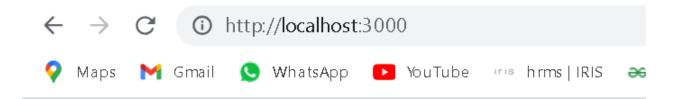
app.js

index.html

```
<html lang="en">
```

about.html

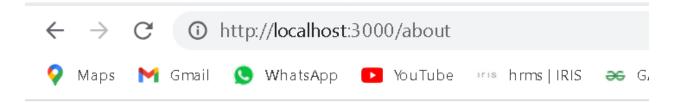
O/P:



Home

Your path to becoming a Node.js ninja!

Homepage About page



About

Your path to becoming a Node.js ninja!

Homepage About page

Redirects & 404's

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

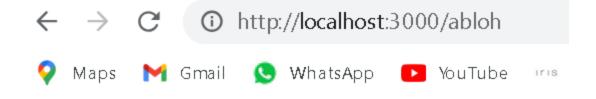
// express app
const app = express();

// listen for requests
app.listen(3000);
```

```
app.get('/', (req, res)=>{
   //res.send('home page');
   res.sendFile('./views/index.html', {root: __dirname});
});
app.get('/about', (req, res)=>{
   // res.send('about page');
   res.sendFile('./views/about.html', {root: dirname});
});
// redirects
//Here automatically sets status code
app.get('/about-us', (req, res)=>{
   res.redirect('/about');
});
// 404 page
//use is used to create middleware function
//use function fires for every single request
//position of use is also important it should be at bottom only
app.use((req, res) =>{
   res.status(404).sendFile('./views/404.html', {root: __dirname})
});
```

O/P:

→if you use "/about-us" it will redirects to "/about.html" page.



404 - OOPS!

That page does not exist

Lesson 7

View Engines

→By using view Engine we can generate dynamic html pages

EJS(Embedded JavaScript)

→Install EJS

PS C:\Users\gudiw\Documents\tuts\node-crash-course> npm install ejs

app.js

```
const express = require('express');
// express app
const app = express();
//register view engine
app.set('view engine', 'ejs');
// listen for requests
app.listen(3000);
app.get('/', (req, res) =>{
    res.render('index');
});
app.get('/about', (req, res)=>{
    res.render('about');
});
app.get('/blogs/create', (req, res)=>{
    res.render('create');
});
```

```
// 404 page
//use is used to create middleware function
//use function fires for every single request
//position of use is also important it should be at bottom only
app.use((req, res) =>{
    res.status(404).render('404');
});
```

index.ejs

```
<html lang="en">
<head>
 <meta charset="UTF-8">
 <meta name="viewport" content="width=device-width, initial-scale=1.0">
 <title>Blog Ninja</title>
</head>
<body>
   <nav>
       <div class = "site-title">
           <a href="/"><h1>Blog Ninja</h1></a>
           A Net Ninja Site
       </div>
       <u1>
           <a href="/">Blogs</a>
           <a href="/about">About</a>
           <a href="/blogs/create">New Blog</a>
       </nav>
   <div class="blogs content">
       <h2>All Blogs</h2>
   </div>
</body>
 /html>
```

about.ejs

```
<html lang="en">
<head>
 <meta charset="UTF-8">
 <meta name="viewport" content="width=device-width, initial-scale=1.0">
 <title>Blog Ninja</title>
</head>
<body>
   <nav>
       <div class = "site-title">
           <a href="/"><h1>Blog Ninja</h1></a>
           A Net Ninja Site
       </div>
       <u1>
           <a href="/">Blogs</a>
           <a href="/about">About</a>
           <a href="/blogs/create">New Blog</a>
       </nav>
   <div class="about content">
       <h2>About Us</h2>
       Lorem ipsum dolor, sit amet consectetur adipisicing elit. Quia
quibusdam quaerat illo a modi tenetur ut blanditiis, illum quo consectetur
recusandae excepturi natus impedit rem, tempora cum fuga quae in.</p>
       Lorem ipsum dolor, sit amet consectetur adipisicing elit. Quia
quibusdam quaerat illo a modi tenetur ut blanditiis, illum quo consectetur
recusandae excepturi natus impedit rem, tempora cum fuga quae in.</p>
       Lorem ipsum dolor, sit amet consectetur adipisicing elit. Quia
quibusdam quaerat illo a modi tenetur ut blanditiis, illum quo consectetur
recusandae excepturi natus impedit rem, tempora cum fuga quae in.
   </div>
</body>
</html>
```

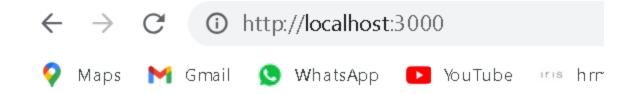
404.ejs

```
<html lang="en">
<head>
 <meta charset="UTF-8">
 <meta name="viewport" content="width=device-width, initial-scale=1.0">
 <title>Blog Ninja</title>
</head>
<body>
   <nav>
       <div class = "site-title">
           <a href="/"><h1>Blog Ninja</h1></a>
           A Net Ninja Site
       </div>
       <u1>
           <a href="/">Blogs</a>
           <a href="/about">About</a>
           <a href="/blogs/create">New Blog</a>
       </nav>
   <div class="not-found content">
       OOPS, page not found :)
   </div>
</body>
 /html>
```

create.ejs

```
<nav>
      <div class = "site-title">
          <a href="/"><h1>Blog Ninja</h1></a>
          A Net Ninja Site
      </div>
       <u1>
          <a href="/">Blogs</a>
          <a href="/about">About</a>
          <a href="/blogs/create">New Blog</a>
       </nav>
   <div class="create-blogs content">
      <form>
          <label for="title">Blog title:</label>
          <input type="text" id="title" name="title" required>
          <label for="snippet">Blog snippet:</label>
          <input type="text" id="snippet" name="snippet" required>
          <label for="body">Blog body:</label>
          <textarea id="body" name="body" required></textarea>
          <button>Submit
       </form>
   </div>
</body>
</html>
```

O/P:



A Net Ninja Site

- Blogs
- About
- New Blog

All Blogs



A Net Nillja Site

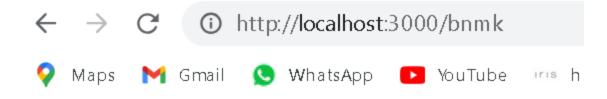
- <u>Blogs</u><u>About</u>
- New Blog

About Us

Lorem ipsum dolor, sit amet consectetur adipisicing elit. Quia quibusdam quaerat illo a modi tenetur ut blanditiis, illum quo consectetur recusandae excepturi natus impedit rem, tempora cum fuga quae in.

Lorem ipsum dolor, sit amet consectetur adipisicing elit. Quia quibusdam quaerat illo a modi tenetur ut blanditiis, illum quo consectetur recusandae excepturi natus impedit rem, tempora cum fuga quae in.

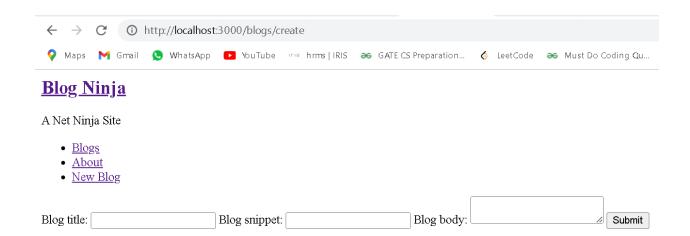
Lorem ipsum dolor, sit amet consectetur adipisicing elit. Quia quibusdam quaerat illo a modi tenetur ut blanditiis, illum quo consectetur recusandae excepturi natus impedit rem, tempora cum fuga quae in.



A Net Ninja Site

- Blogs
- About
- New Blog

OOPS, page not found:)



Passing Data into views

app.js

```
const express = require('express');
// express app
const app = express();
//register view engine
app.set('view engine', 'ejs');
// listen for requests
app.listen(3000);
app.get('/', (req, res)=>{
    const blogs = [
        {title: 'Sandy finds eggs', snippet: 'Lorem ipsum dolor sit amet
consectetur'},
        {title: 'Raghava finds stars', snippet: 'Lorem ipsum dolor sit
amet consectetur'},
        {title: 'How to defeat bowser', snippet: 'Lorem ipsum dolor sit
amet consectetur'},
   ];
   res.render('index', {title: 'Home', blogs});
});
app.get('/about', (req, res)=>{
   res.render('about', {title: 'About'});
});
app.get('/blogs/create', (req, res)=>{
    res.render('create', {title: 'Create a new Blog'});
});
// 404 page
app.use((req, res) =>{
   res.status(404).render('404', {title: '404'});
});
```

index.html

```
<html lang="en">
<head>
 <meta charset="UTF-8">
 <meta name="viewport" content="width=device-width, initial-scale=1.0">
 <title>Blog Ninja | <%= title %> </title>
</head>
<body>
   <nav>
       <div class = "site-title">
          <a href="/"><h1>Blog Ninja</h1></a>
          A Net Ninja Site
       </div>
       <u1>
          <a href="/">Blogs</a>
          <a href="/about">About</a>
          <a href="/blogs/create">New Blog</a>
       </nav>
   <div class="blogs content">
       <h2>All Blogs</h2>
       <% if(blogs.length > 0) { %>
          <% blogs.forEach(blog => { %>
              <h3 class="title"><%= blog.title %></h3>
              <%= blog.snippet %>
          <% }) %>
       <% } else { %>
          There is no blogs to display...
       <% } %>
   </div>
</body>
</html>
```

about.ejs

```
<html lang="en">
<head>
 <meta charset="UTF-8">
 <meta name="viewport" content="width=device-width, initial-scale=1.0">
 <title>Blog Ninja | <%= title %></title>
</head>
<body>
   <nav>
       <div class = "site-title">
           <a href="/"><h1>Blog Ninja</h1></a>
           A Net Ninja Site
       </div>
       <u1>
           <a href="/">Blogs</a>
           <a href="/about">About</a>
           <a href="/blogs/create">New Blog</a>
       </nav>
   <div class="about content">
       <h2>About Us</h2>
       Lorem ipsum dolor, sit amet consectetur adipisicing elit. Quia
quibusdam quaerat illo a modi tenetur ut blanditiis, illum quo consectetur
recusandae excepturi natus impedit rem, tempora cum fuga quae in.</p>
       Lorem ipsum dolor, sit amet consectetur adipisicing elit. Quia
quibusdam quaerat illo a modi tenetur ut blanditiis, illum quo consectetur
recusandae excepturi natus impedit rem, tempora cum fuga quae in.</p>
       Lorem ipsum dolor, sit amet consectetur adipisicing elit. Quia
quibusdam quaerat illo a modi tenetur ut blanditiis, illum quo consectetur
recusandae excepturi natus impedit rem, tempora cum fuga quae in.
   </div>
</body>
</html>
```

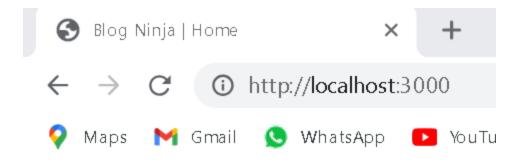
404.ejs

```
<html lang="en">
<head>
 <meta charset="UTF-8">
 <meta name="viewport" content="width=device-width, initial-scale=1.0">
 <title>Blog Ninja | <%= title %></title>
</head>
<body>
   <nav>
       <div class = "site-title">
           <a href="/"><h1>Blog Ninja</h1></a>
           A Net Ninja Site
       </div>
       <u1>
           <a href="/">Blogs</a>
           <a href="/about">About</a>
           <a href="/blogs/create">New Blog</a>
       </nav>
   <div class="not-found content">
       OOPS, page not found :)
   </div>
</body>
 /html>
```

create.ejs

```
<nav>
      <div class = "site-title">
          <a href="/"><h1>Blog Ninja</h1></a>
          A Net Ninja Site
      </div>
      <u1>
          <a href="/">Blogs</a>
          <a href="/about">About</a>
          <a href="/blogs/create">New Blog</a>
       </nav>
   <div class="create-blogs content">
      <form>
          <label for="title">Blog title:</label>
          <input type="text" id="title" name="title" required>
          <label for="snippet">Blog snippet:</label>
          <input type="text" id="snippet" name="snippet" required>
          <label for="body">Blog body:</label>
          <textarea id="body" name="body" required></textarea>
       <button>Submit
       </form>
   </div>
</body>
/html>
```

O/P:



A Net Ninja Site

- <u>Blogs</u>
- About
- New Blog

All Blogs

Sandy finds eggs

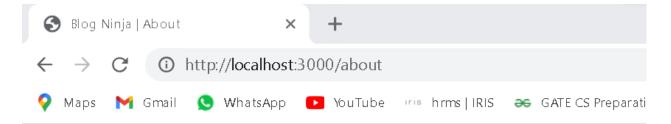
Lorem ipsum dolor sit amet consectetur

Raghava finds stars

Lorem ipsum dolor sit amet consectetur

How to defeat bowser

Lorem ipsum dolor sit amet consectetur



A Net Ninja Site

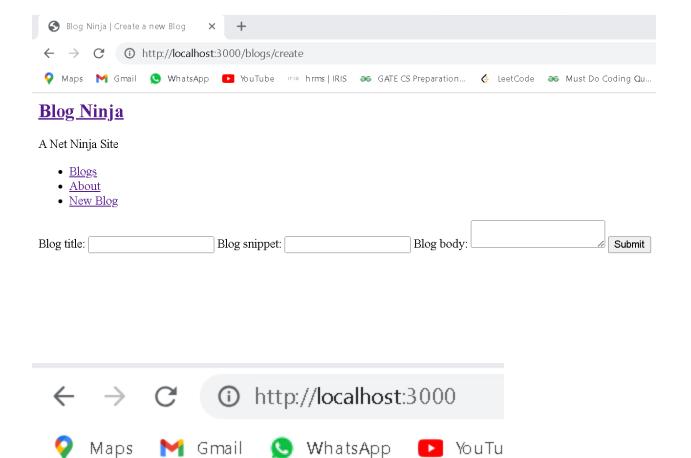
- <u>Blogs</u>
- About
- New Blog

About Us

Lorem ipsum dolor, sit amet consectetur adipisicing elit. Quia quibusdam quaerat ilk cum fuga quae in.

Lorem ipsum dolor, sit amet consectetur adipisicing elit. Quia quibusdam quaerat ille cum fuga quae in.

Lorem ipsum dolor, sit amet consectetur adipisicing elit. Quia quibusdam quaerat ille cum fuga quae in.



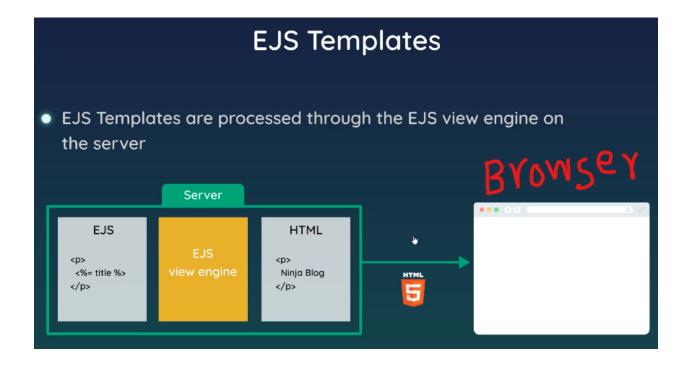
A Net Ninja Site

- <u>Blogs</u>
- About
- New Blog

All Blogs

There is no blogs to display...

EJS Template



This process is called "Server side rendering"

Partials

```
view→partials →footer.ejs

→head.ejs

→nav.ejs

add.js
```

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

// express app
const app = express();

//register view engine
app.set('view engine', 'ejs');

// listen for requests
app.listen(3000);
```

```
app.get('/', (req, res)=>{
    const blogs = [
        {title: 'Sandy finds eggs', snippet: 'Lorem ipsum dolor sit amet
consectetur'},
        {title: 'Raghava finds stars', snippet: 'Lorem ipsum dolor sit
amet consectetur'},
        {title: 'How to defeat bowser', snippet: 'Lorem ipsum dolor sit
amet consectetur'},
    ];
    res.render('index', {title: 'Home', blogs});
});
app.get('/about', (req, res)=>{
    res.render('about', {title: 'About'});
});
app.get('/blogs/create', (req, res)=>{
    res.render('create', {title: 'Create a new Blog'});
});
// 404 page
app.use((req, res) =>{
    res.status(404).render('404', {title: '404'});
});
```

index.html

about.html

```
<html lang="en">
<%- include('./partials/head.ejs') %>
<body>
   <%- include('./partials/nav.ejs') %>
   <div class="about content">
       <h2>About Us</h2>
       Lorem ipsum dolor, sit amet consectetur adipisicing elit. Quia
quibusdam quaerat illo a modi tenetur ut blanditiis, illum quo consectetur
recusandae excepturi natus impedit rem, tempora cum fuga quae in.
       Lorem ipsum dolor, sit amet consectetur adipisicing elit. Quia
quibusdam quaerat illo a modi tenetur ut blanditiis, illum quo consectetur
recusandae excepturi natus impedit rem, tempora cum fuga quae in.
       Lorem ipsum dolor, sit amet consectetur adipisicing elit. Quia
quibusdam quaerat illo a modi tenetur ut blanditiis, illum quo consectetur
recusandae excepturi natus impedit rem, tempora cum fuga quae in.
   </div>
```

```
<%- include('./partials/footer.ejs') %>
</body>
</html>
```

404.html

create.html

head.ejs

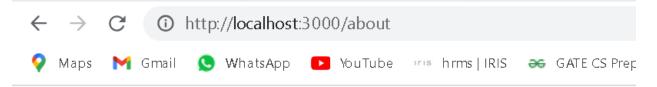
```
<head>
     <meta charset="UTF-8">
     <meta name="viewport" content="width=device-width, initial-scale=1.0">
        <title>Blog Ninja | <%= title %> </title>
     </head>
```

nav.ejs

footer.ejs

```
<footer>
Copyright &copy; Blog Ninja 2020
</footer>
```

O/P:



Blog Ninja

A Net Ninja Site

- Blogs
- About
- New Blog

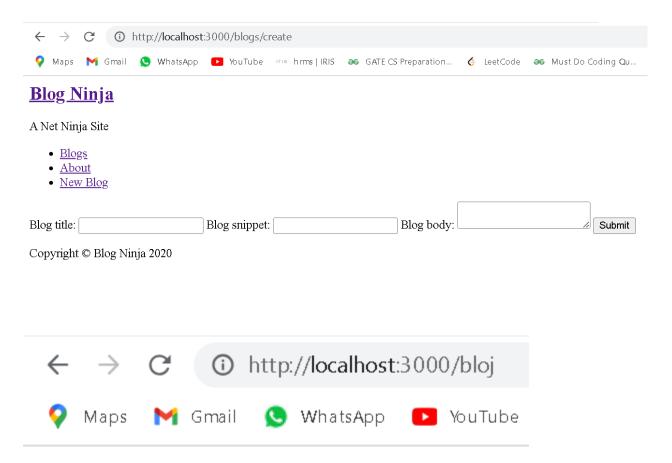
About Us

Lorem ipsum dolor, sit amet consectetur adipisicing elit. Quia quibusdam quaera cum fuga quae in.

Lorem ipsum dolor, sit amet consectetur adipisicing elit. Quia quibusdam quaera cum fuga quae in.

Lorem ipsum dolor, sit amet consectetur adipisicing elit. Quia quibusdam quaera cum fuga quae in.

Copyright © Blog Ninja 2020



A Net Ninja Site

- <u>Blogs</u>
- About
- New Blog

OOPS, page not found:) Copyright © Blog Ninja 2020

Adding CSS

→ https://fonts.google.com/

The above link selecting the style

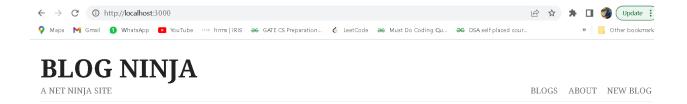
head.ejs

```
<head>
   <meta charset="UTF-8">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <title>Blog Ninja | <%= title %> </title>
   <style>
        @import
url('https://fonts.googleapis.com/css2?family=Noto+Serif:wght@400;700&disp
lay=swap');
       body {
         max-width: 1200px;
         margin: 20px auto;
         padding: 0 20px;
          font-family: 'Noto Serif', serif;
       p, h1, h2, h3, a, u1{
         margin: 0;
         padding: 0;
          text-decoration: none;
          color: #222;
        /* nav & footer styles */
       nav{
          display: flex;
          justify-content: space-between;
          margin-bottom: 60px;
         padding-bottom: 10px;
         border-bottom: 1px solid #ddd;
          text-transform: uppercase;
        }
```

```
nav ul{
 display: flex;
  justify-content: space-between;
  align-items: flex-end;
nav li{
  list-style-type: none;
  margin-left: 20px;
nav h1{
  font-size: 3em;
nav p, nav a{
 color: #777;
  font-weight: 300;
}
footer{
 color: #777;
 text-align: center;
 margin: 80px auto 20px;
}
h2{
  margin-bottom: 40px;
h3{
  text-transform: capitalize;
  margin-bottom: 8px;
.content{
  margin-left: 20px;
/* index styles */
/* details styles */
/* create styles */
.create-blog form{
 max-width: 400px;
  margin: 0 auto;
```

```
.create-blog input,
      .create-blog textarea{
       display: block;
       width: 100%;
       margin: 10px 0;
       padding: 8px;
      .create-blog label{
       display: block;
       margin-top: 24px;
      textarea{
        height: 120px;
      .create-blog button{
       margin-top: 20px;
       background: crimson;
       color: white;
       padding: 6px;
       border: 0;
        font-size: 1.2em;
        cursor: pointer;
 </style>
</head>
```

O/P:



All Blogs

Sandy Finds Eggs

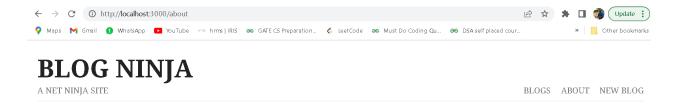
Lorem ipsum dolor sit amet consectetur

Raghava Finds Stars

Lorem ipsum dolor sit amet consectetur

How To Defeat Bowser

Lorem ipsum dolor sit amet consectetur



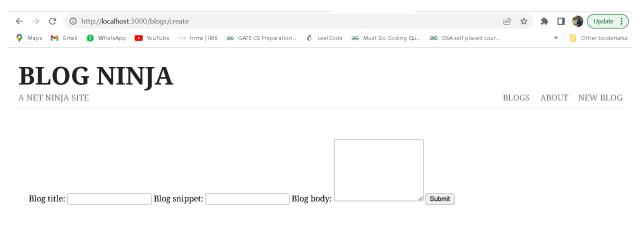
About Us

Lorem ipsum dolor, sit amet consectetur adipisicing elit. Quia quibusdam quaerat illo a modi tenetur ut blanditiis, illum quo consectetur recusandae excepturi natus impedit rem, tempora cum fuga quae in.

Lorem ipsum dolor, sit amet consectetur adipisicing elit. Quia quibusdam quaerat illo a modi tenetur ut blanditiis, illum quo consectetur recusandae excepturi natus impedit rem, tempora cum fuga quae in.

Lorem ipsum dolor, sit amet consectetur adipisicing elit. Quia quibusdam quaerat illo a modi tenetur ut blanditiis, illum quo consectetur recusandae excepturi natus impedit rem, tempora cum fuga quae in.

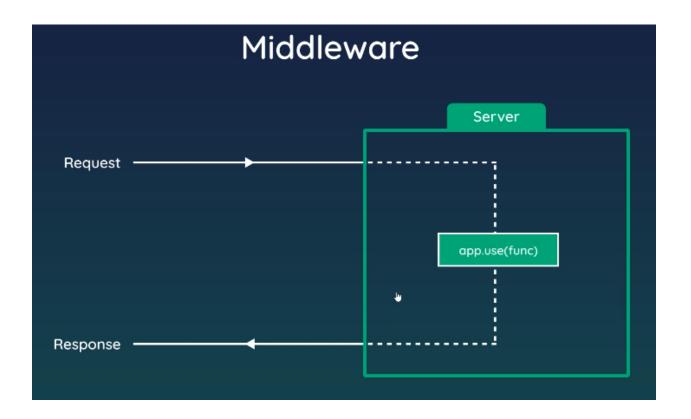
Copyright © Blog Ninja 2020

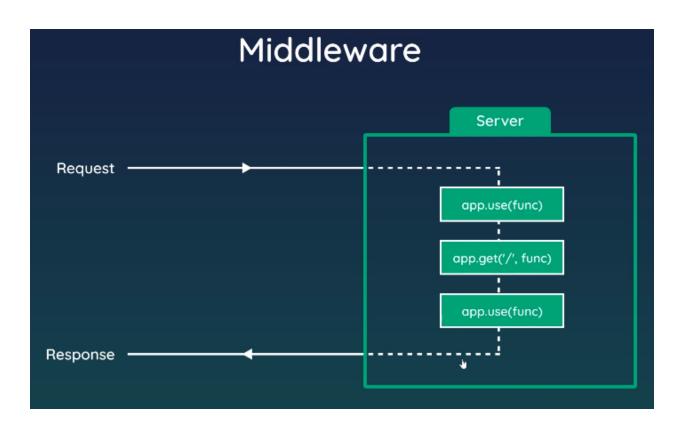


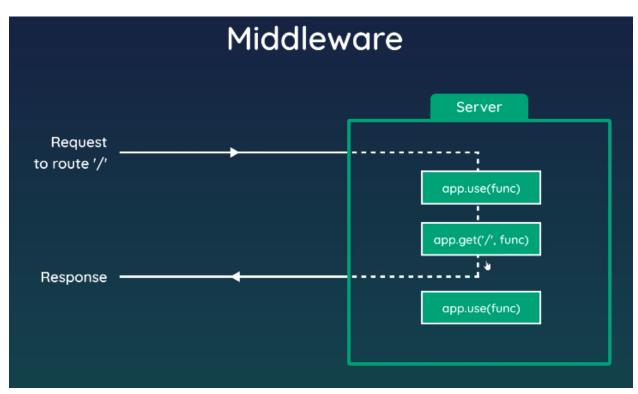
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Lesson 8

Middleware







Middleware Examples

- Logger middleware to log details of every request
- Authentication check middleware for protected routes
- Middleware to parse JSON data from requests
- Return 404 pages

If i use middleware then it can't be stopped

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

// express app
const app = express();

//register view engine
app.set('view engine', 'ejs');

// listen for requests
app.listen(3000);

app.use((req, res) => {
    console.log('new request made:');
    console.log('host: ', req.hostname);
    console.log('path: ', req.path);
    console.log('method: ', req.method);
    //next();
});
```

```
app.get('/', (req, res)=>{
   const blogs = [
        {title: 'Sandy finds eggs', snippet: 'Lorem ipsum dolor sit amet
consectetur'},
        {title: 'Raghava finds stars', snippet: 'Lorem ipsum dolor sit
amet consectetur'},
        {title: 'How to defeat bowser', snippet: 'Lorem ipsum dolor sit
amet consectetur'},
    ];
    res.render('index', {title: 'Home', blogs});
});
app.get('/about', (req, res)=>{
    res.render('about', {title: 'About'});
});
app.get('/blogs/create', (req, res)=>{
    res.render('create', {title: 'Create a new Blog'});
});
// 404 page
app.use((req, res) =>{
    res.status(404).render('404', {title: '404'});
});
```

PS C:\Users\gudiw\Documents\tuts\node-crash-course> powershell

-ExecutionPolicy Bypass -Command "nodemon app"

[nodemon] restarting due to changes...

[nodemon] starting `node app.js`

[nodemon] restarting due to changes...

[nodemon] starting `node app.js`

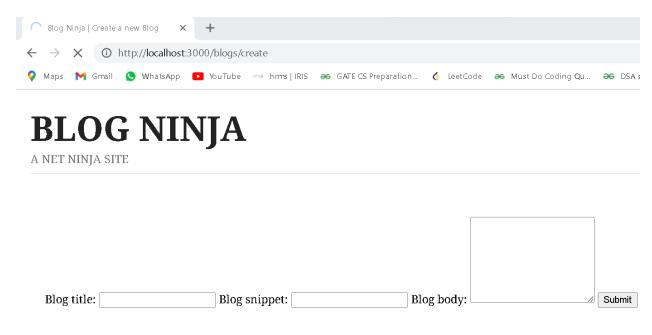
[nodemon] restarting due to changes...

new request made:

host: localhost

path: /blogs/create

method: GET



→web page is still hanging

Using next()

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

// express app
const app = express();

//register view engine
app.set('view engine', 'ejs');

// listen for requests
app.listen(3000);

app.use((req, res, next) => {
    console.log('new request made:');
    console.log('host: ', req.hostname);
    console.log('path: ', req.path);
    console.log('method: ', req.method);
    next();
});
```

```
app.use((req, res, next) => {
    console.log('in the next middleware');
   next();
});
app.get('/', (req, res)=>{
    const blogs = [
        {title: 'Sandy finds eggs', snippet: 'Lorem ipsum dolor sit amet
consectetur'},
        {title: 'Raghava finds stars', snippet: 'Lorem ipsum dolor sit
amet consectetur'},
        {title: 'How to defeat bowser', snippet: 'Lorem ipsum dolor sit
amet consectetur' },
   1;
    res.render('index', {title: 'Home', blogs});
});
app.get('/about', (req, res)=>{
    res.render('about', {title: 'About'});
});
app.get('/blogs/create', (req, res)=>{
    res.render('create', {title: 'Create a new Blog'});
});
// 404 page
app.use((req, res) =>{
   res.status(404).render('404', {title: '404'});
});
```

PS C:\Users\gudiw\Documents\tuts\node-crash-course> powershell

-ExecutionPolicy Bypass -Command "nodemon app"

[nodemon] restarting due to changes...
[nodemon] starting `node app.js`

```
new request made:
host: localhost
path: /blogs/create
method: GET
new request made:
host: localhost
path: /
method: GET
[nodemon] restarting due to changes...
[nodemon] starting `node app.js`
new request made:
host: localhost
path: /
method: GET
in the next middleware
new request made:
host: localhost
path: /about
method: GET
in the next middleware
```

3rd-Party Middleware

PS C:\Users\gudiw\Documents\tuts\node-crash-course> npm install morgan

```
const express = require('express');
const morgan = require('morgan');

// express app
const app = express();

//register view engine
app.set('view engine', 'ejs');

// listen for requests
app.listen(3000);
```

```
app.use(morgan('dev'));
//app.use(morgan('tiny')); //slight change
app.get('/', (req, res) =>{
    const blogs = [
        {title: 'Sandy finds eggs', snippet: 'Lorem ipsum dolor sit amet
consectetur'},
        {title: 'Raghava finds stars', snippet: 'Lorem ipsum dolor sit
amet consectetur'},
        {title: 'How to defeat bowser', snippet: 'Lorem ipsum dolor sit
amet consectetur'},
    ];
    res.render('index', {title: 'Home', blogs});
});
app.get('/about', (req, res)=>{
    res.render('about', {title: 'About'});
});
app.get('/blogs/create', (req, res)=>{
    res.render('create', {title: 'Create a new Blog'});
});
// 404 page
app.use((req, res) =>{
    res.status(404).render('404', {title: '404'});
```

PS C:\Users\gudiw\Documents\tuts\node-crash-course>powershell

-ExecutionPolicy Bypass -Command "nodemon app"

[nodemon] restarting due to changes...

[nodemon] starting `node app.js`

GET / 304 - - 13.821 ms

Static Files

```
const express = require('express');
const morgan = require('morgan');
// express app
const app = express();
//register view engine
app.set('view engine', 'ejs');
// listen for requests
app.listen(3000);
// middleware & static files
app.use(express.static('public'));
app.use(morgan('dev'));
//app.use(morgan('tiny')); //slight change
app.get('/', (req, res)=>{
   const blogs = [
        {title: 'Sandy finds eggs', snippet: 'Lorem ipsum dolor sit amet
consectetur'},
        {title: 'Raghava finds stars', snippet: 'Lorem ipsum dolor sit
amet consectetur'},
        {title: 'How to defeat bowser', snippet: 'Lorem ipsum dolor sit
amet consectetur'},
   ];
    res.render('index', {title: 'Home', blogs});
});
app.get('/about', (req, res)=>{
    res.render('about', {title: 'About'});
});
app.get('/blogs/create', (req, res)=>{
    res.render('create', {title: 'Create a new Blog'});
```

```
});

// 404 page

app.use((req, res) =>{
    res.status(404).render('404', {title: '404'});
});
```

 $public \rightarrow styles.css$

style.css

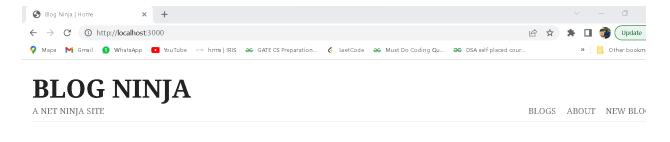
```
@import
url('https://fonts.googleapis.com/css2?family=Noto+Serif:wght@400;700&disp
lay=swap');
       body {
          max-width: 1200px;
          margin: 20px auto;
          padding: 0 20px;
          font-family: 'Noto Serif', serif;
          max-width: 1200px;
        }
       p, h1, h2, h3, a, u1{
         margin: 0;
         padding: 0;
          text-decoration: none;
          color: #222;
        }
        /* nav & footer styles */
       nav{
          display: flex;
          justify-content: space-between;
          margin-bottom: 60px;
          padding-bottom: 10px;
          border-bottom: 1px solid #ddd;
          text-transform: uppercase;
        nav ul{
```

```
display: flex;
  justify-content: space-between;
  align-items: flex-end;
nav li{
  list-style-type: none;
 margin-left: 20px;
}
nav h1{
  font-size: 3em;
nav p, nav a{
  color: #777;
  font-weight: 300;
footer{
 color: #777;
 text-align: center;
 margin: 80px auto 20px;
}
h2{
  margin-bottom: 40px;
h3{
  text-transform: capitalize;
  margin-bottom: 8px;
.content{
 margin-left: 20px;
}
/* index styles */
/* details styles */
/* create styles */
.create-blog form{
 max-width: 400px;
  margin: 0 auto;
```

```
.create-blog input,
.create-blog textarea{
 display: block;
 width: 100%;
 margin: 10px 0;
 padding: 8px;
.create-blog label{
 display: block;
 margin-top: 24px;
textarea{
 height: 120px;
.create-blog button{
 margin-top: 20px;
 background: crimson;
 color: white;
 padding: 6px;
 border: 0;
 font-size: 1.2em;
  cursor: pointer;
```

head.ejs

 $\overline{O/P}$:



All Blogs

Sandy Finds Eggs

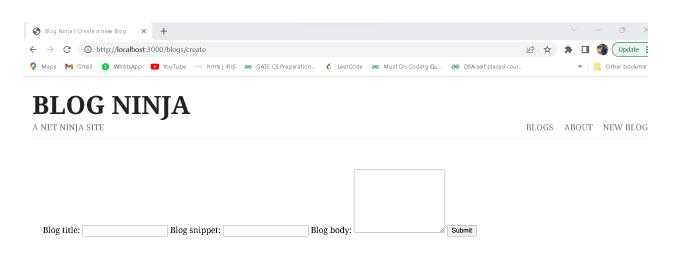
Lorem ipsum dolor sit amet consectetur

Raghava Finds Stars

Lorem ipsum dolor sit amet consectetur

How To Defeat Bowser

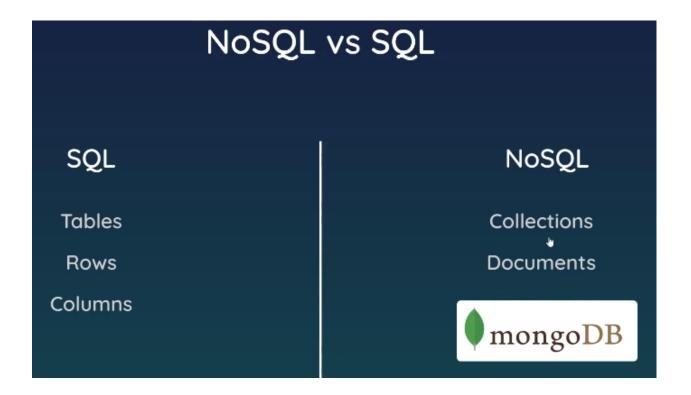
Lorem ipsum dolor sit amet consectetur



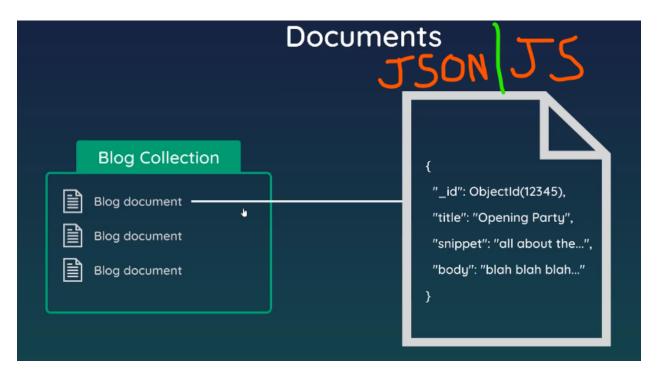
Copyright © Blog Ninja 2020

Lesson 9

MangoDB







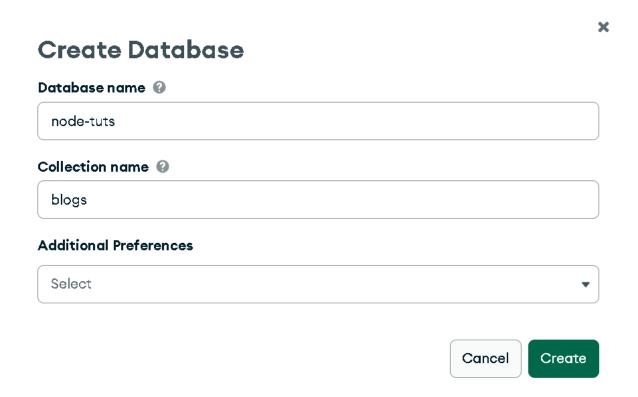
→Each document will store one block.

MangoDB Setup & Atlas

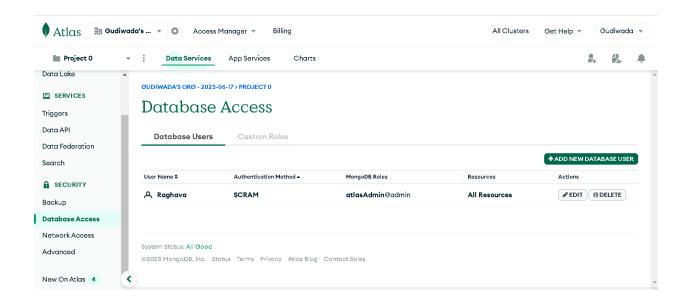
https://www.mongodb.com/atlas/database

Go to the Website signUP

- 1. Create cluster (given cluster name \rightarrow nodetuts)
- 2. Create database



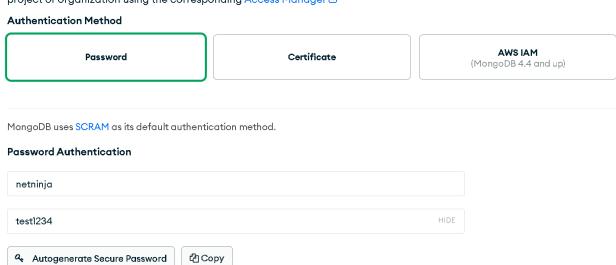
Go to Database Access



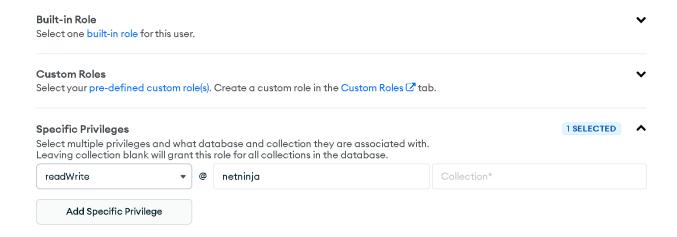
Add new database user

Add New Database User

Create a database user to grant an application or user, access to databases and collections in your clusters in this Atlas project. Granular access control can be configured with default privileges or custom roles. You can grant access to an Atlas project or organization using the corresponding Access Manager 🗗



→while adding database user give access to the privileges



We can also mention whatever the database we want



→After creation of Database user look like this

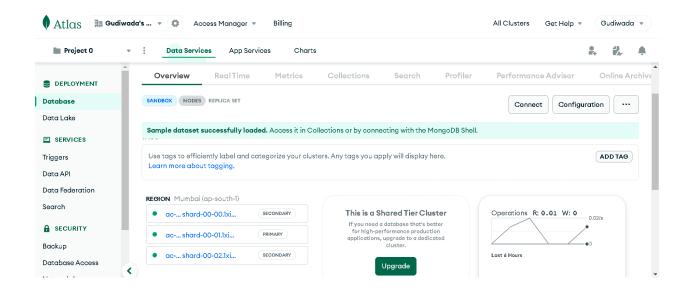
Database Access



Database Access

Database Users	Custom Roles			
				+ ADD NEW DATABASE USER
User Name \$	Authentication Method •	MongoDB Roles	Resources	Actions
🙏 netninja	SCRAM	readWriteAnyDatabase@admin	All Resources	P EDIT
A Raghava	SCRAM	atlasAdmin@admin	All Resources	₽ EDIT

->Go To Connect



→Drivers (select go to your Application)

mongodb+srv://<username>:<password>@nodetuts.1xigocw.mongodb.n et/test?retryWrites=true&w=majority

Example:

mongodb+srv://netninja:test1234@nodetuts.1xigocw.mongodb.net/node -tuts?retryWrites=true&w=majority

```
<username> → netninja (add new database user)
<password> → test1234
  test → node-tuts (database name)
app.js
```

```
const express = require('express');
const morgan = require('morgan');
// express app
const app = express();
// connect to mongodb
const dbURI =
'mongodb+srv://netninja:test1234@nodetuts.1xigocw.mongodb.net/?retryWrites
=true&w=majority';
//register view engine
app.set('view engine', 'ejs');
// listen for requests
app.listen(3000);
// middleware & static files
app.use(express.static('public'));
app.use(morgan('dev'));
//app.use(morgan('tiny')); //slight change
app.get('/', (req, res)=>{
    const blogs = [
        {title: 'Sandy finds eggs', snippet: 'Lorem ipsum dolor sit amet
consectetur'},
        {title: 'Raghava finds stars', snippet: 'Lorem ipsum dolor sit
amet consectetur'},
        {title: 'How to defeat bowser', snippet: 'Lorem ipsum dolor sit
amet consectetur'},
   ];
   res.render('index', {title: 'Home', blogs});
});
```

```
app.get('/about', (req, res)=>{
    res.render('about', {title: 'About'});
});

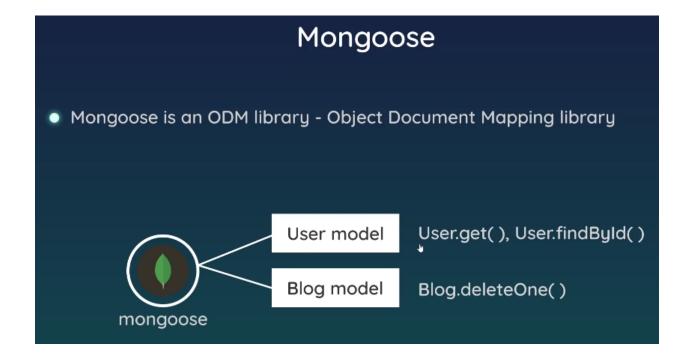
app.get('/blogs/create', (req, res)=>{
    res.render('create', {title: 'Create a new Blog'});
});

// 404 page

app.use((req, res) =>{
    res.status(404).render('404', {title: '404'});
});
```

Mongoose, Models & Schemas

PS C:\Users\gudiw\Documents\tuts\node-crash-course> npm install mongoose



```
const express = require('express');
const morgan = require('morgan');
const mongoose = require('mongoose');
// express app
const app = express();
// connect to mongodb
const dbURI =
'mongodb+srv://netninja:test1234@nodetuts.1xigocw.mongodb.net/node-tuts?re
tryWrites=true&w=majority';
//mongoose.connect(dbURI, { useNewUrlParser: true, useUnifiedTopology:
true }) //if u see deprecationwarning then use this line
mongoose.connect(dbURI)
 //.then(result => console.log('connected to db'))
  .then(result => app.listen(3000))
  .catch((err) => console.log(err));
//register view engine
app.set('view engine', 'ejs');
// middleware & static files
app.use(express.static('public'));
app.use(morgan('dev'));
//app.use(morgan('tiny')); //slight change
app.get('/', (req, res)=>{
    const blogs = [
        {title: 'Sandy finds eggs', snippet: 'Lorem ipsum dolor sit amet
consectetur'},
        {title: 'Raghava finds stars', snippet: 'Lorem ipsum dolor sit
amet consectetur'},
        {title: 'How to defeat bowser', snippet: 'Lorem ipsum dolor sit
amet consectetur'},
    ];
```

```
res.render('index', {title: 'Home', blogs});

});

app.get('/about', (req, res)=>{
    res.render('about', {title: 'About'});

});

app.get('/blogs/create', (req, res)=>{
    res.render('create', {title: 'Create a new Blog'});

});

// 404 page

app.use((req, res) =>{
    res.status(404).render('404', {title: '404'});

});
```

PS C:\Users\gudiw\Documents\tuts\node-crash-course> powershell

-ExecutionPolicy Bypass -Command "nodemon app"

```
[nodemon] 2.0.22
[nodemon] to restart at any time, enter 'rs'
[nodemon] watching path(s): *.*
[nodemon] watching extensions: js,mjs,json
[nodemon] starting 'node app.js'
[nodemon] restarting due to changes...
[nodemon] starting 'node app.js'
C:\Users\gudiw\Documents\tuts\node-crash-course\app.js:12
 .then(result => console.log('connected to db'))
connected to db
[nodemon] restarting due to changes...
[nodemon] starting 'node app.js'
connected to db
[nodemon] restarting due to changes...
[nodemon] restarting due to changes...
[nodemon] starting 'node app.js'
```

Schemas & Models

- Schemas defines the structure of a type of data / document
 - Properties & property types

User Schema: •

- name (string), required
- age (number)
- bio (string), required

Blog Schema:

- title (string), required
- snippet (string), required
- body (string), required

Schemas & Models

Models allow us to communicate with database collections

Blog Model

get, save, delete, etc

Database
Blog Collection

Models → blog.js

blog.js

```
const mongoose = require('mongoose');
const Schema = mongoose.Schema;
// Schema is a structure
const blogSchema = new Schema({
    title: {
        type: String,
        required: true
    },
    snippet: {
        type: String,
        required: true
    },
   body: {
        type: String,
        required: true
}, {timestamps: true });
// name of the model is Captial letter Here Blog
const Blog = mongoose.model('Blog', blogSchema);
module.exports = Blog;
```

Getting & Saving Data

 \rightarrow while executing the code if you see this kind of error Following steps to resolve the error.

MongooseServerSelectionError: Could not connect to any servers in your MongoDB Atlas cluster. One common reason is that you're trying to access the database from an IP that isn't whitelisted. Make sure your current IP address is on

your Atlas cluster's IP whitelist:

https://www.mongodb.com/docs/atlas/security-whitelist/

at handleConnectionErrors

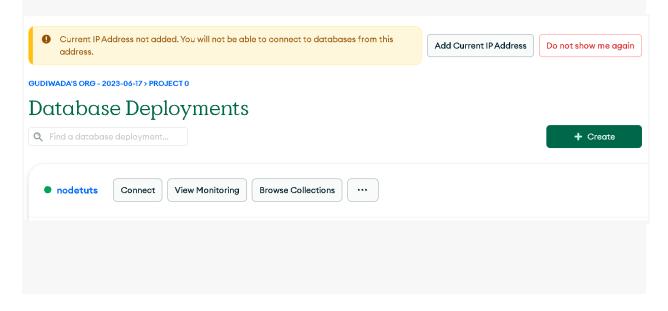
(C:\Users\gudiw\Documents\tuts\node-crash-course\node_modules\mongoose\lib\c onnection.js:792:11)

→If the database is not connecting then

Here are the steps to whitelist your IP address in MongoDB Atlas:

- 1. Open the MongoDB Atlas website and log in to your account.
- 2. Go to your project and navigate to the "Network Access" or "Security" section.
- 3. Find the IP Whitelist section and click on the "Add IP Address" button.
- 4. Choose "Add Your Current IP Address" to automatically add your current IP address to the whitelist. Alternatively, you can specify a specific IP address or range manually.
- 5. Save the changes and ensure that your IP address is now included in the whitelist.

By whitelisting your IP address, you should be able to connect to your MongoDB Atlas cluster successfully without encountering the "MongooseServerSelectionError" related to IP whitelisting issues.



```
    Current IP Address (117.99.207.64/32) added!
    Visit <u>Network Access</u> to modify your settings.
```

```
const express = require('express');
const morgan = require('morgan');
const mongoose = require('mongoose');
const Blog = require('./models/blog');
// express app
const app = express();
// connect to mongodb
const dbURI =
'mongodb+srv://netninja:test1234@nodetuts.1xigocw.mongodb.net/node-tuts?re
tryWrites=true&w=majority';
//mongoose.connect(dbURI, {        useNewUrlParser: true,        useUnifiedTopology:
true }) //if u see deprecationwarning then use this line
mongoose.connect(dbURI)
 //.then(result => console.log('connected to db'))
  .then(result => app.listen(3000))
  .catch((err) => console.log(err));
//register view engine
app.set('view engine', 'ejs');
// middleware & static files
app.use(express.static('public'));
app.use(morgan('dev'));
//app.use(morgan('tiny')); //slight change
```

```
// mongoose and mondo sandbox routes
app.get('/add-blog', (req, res) =>{
    const blog = new Blog({
        title: 'new blog 2',
        snippet: 'about my new blog',
       body: 'more about my new blog'
    });
    // save documents to database
   blog.save()
     .then((result) => {
       res.send(result)
     })
     .catch((err) => {
       console.log(err);
     });
})
// routes
app.get('/', (req, res)=>{
    const blogs = [
        {title: 'Sandy finds eggs', snippet: 'Lorem ipsum dolor sit amet
consectetur'},
        {title: 'Raghava finds stars', snippet: 'Lorem ipsum dolor sit
amet consectetur'},
        {title: 'How to defeat bowser', snippet: 'Lorem ipsum dolor sit
amet consectetur'},
   ];
   res.render('index', {title: 'Home', blogs});
});
app.get('/about', (req, res)=>{
   res.render('about', {title: 'About'});
});
app.get('/blogs/create', (req, res)=>{
   res.render('create', {title: 'Create a new Blog'});
});
```

```
// 404 page
app.use((req, res) =>{
    res.status(404).render('404', {title: '404'});
});
```



Database mongodb

```
__id: ObjectId('648ea9b42d7c1bc81a37da9c')
    title: "new blog"
    snippet: "about my new blog"
    body: "more about my new blog"
    createdAt: 2023-06-18T06:52:36.324+00:00
    updatedAt: 2023-06-18T06:52:36.324+00:00
```

```
_id: ObjectId('648eab04280090ba6cf11fc5')
title: "new blog 2"
snippet: "about my new blog"
body: "more about my new blog"
createdAt: 2023-06-18T06:58:12.111+00:00
updatedAt: 2023-06-18T06:58:12.111+00:00
__v: 0
```

```
const express = require('express');
const morgan = require('morgan');
const mongoose = require('mongoose');
const Blog = require('./models/blog');
// express app
const app = express();
// connect to mongodb
const dbURI =
'mongodb+srv://netninja:test1234@nodetuts.1xigocw.mongodb.net/node-tuts?re
tryWrites=true&w=majority';
//mongoose.connect(dbURI, { useNewUrlParser: true, useUnifiedTopology:
true }) //if u see deprecationwarning then use this line
mongoose.connect(dbURI)
 //.then(result => console.log('connected to db'))
  .then(result => app.listen(3000))
  .catch((err) => console.log(err));
//register view engine
app.set('view engine', 'ejs');
// middleware & static files
app.use(express.static('public'));
app.use(morgan('dev'));
//app.use(morgan('tiny')); //slight change
```

```
// mongoose and mondo sandbox routes
app.get('/add-blog', (req, res) =>{
    const blog = new Blog({
        title: 'new blog 2',
        snippet: 'about my new blog',
        body: 'more about my new blog'
    });
    // save documents to database
   blog.save()
     .then((result) => {
        res.send(result)
     })
     .catch((err) => {
        console.log(err);
     });
});
app.get('/all-blogs', (req, res) =>{
   Blog.find()
    .then((result) => {
        res.send(result)
     })
     .catch((err) => {
        console.log(err);
    });
});
app.get('/single-blog', (req, res) =>{
    Blog.findById('648ea9b42d7c1bc81a37da9c')
    .then((result) => {
        res.send(result)
     })
    .catch((err) => {
        console.log(err);
    });
});
// routes
app.get('/', (req, res)=>{
```

```
const blogs = [
        {title: 'Sandy finds eggs', snippet: 'Lorem ipsum dolor sit amet
consectetur'},
        {title: 'Raghava finds stars', snippet: 'Lorem ipsum dolor sit
amet consectetur'},
        {title: 'How to defeat bowser', snippet: 'Lorem ipsum dolor sit
amet consectetur'},
    ];
    res.render('index', {title: 'Home', blogs});
});
app.get('/about', (req, res)=>{
    res.render('about', {title: 'About'});
});
app.get('/blogs/create', (req, res)=>{
    res.render('create', {title: 'Create a new Blog'});
});
// 404 page
app.use((req, res) =>{
    res.status(404).render('404', {title: '404'});
});
```

single-blog

```
← → C ① http://localhost:3000/single-blog

Maps M Gmail ⑤ WhatsApp ⑤ YouTube **** hrms | IRIS → GATE CS Preparation.... ⓒ LeetCode → Must Do Coding Qu... → DSA self-placed cour...

{"_id*:"648ea9b42d7c1bc81a37da9c", "title*:"new blog", "snippet*:"about my new blog", "body": "more about my new blog", "createdAt*:"2023-06-18706:52:36.324Z", "updatedAt*:"2023-06-18706:52:36.324Z", "updatedAt*:"2023-06-187
```

all-blogs

Outputting Documents in Views

```
const express = require('express');
const morgan = require('morgan');
const mongoose = require('mongoose');
const Blog = require('./models/blog');
// express app
const app = express();
// connect to mongodb
const dbURI =
'mongodb+srv://netninja:test1234@nodetuts.1xigocw.mongodb.net/node-tuts?re
tryWrites=true&w=majority';
//mongoose.connect(dbURI, { useNewUrlParser: true, useUnifiedTopology:
true }) //if u see deprecationwarning then use this line
mongoose.connect(dbURI)
 //.then(result => console.log('connected to db'))
  .then(result => app.listen(3000))
  .catch((err) => console.log(err));
//register view engine
app.set('view engine', 'ejs');
 / middleware & static files
```

```
app.use(express.static('public'));
app.use(morgan('dev'));
//app.use(morgan('tiny')); //slight change
// routes
app.get('/', (req, res)=>{
   res.redirect('/blogs');
});
app.get('/about', (req, res)=>{
   res.render('about', {title: 'About'});
});
// blog routes
app.get('/blogs', (req, res) =>{
   Blog.find().sort({ createdAt: -1 }) //descending order
   .then((result) => {
        res.render('index', {title: 'All Blogs', blogs: result })
     })
    .catch((err) => {
        console.log(err);
   });
})
app.get('/blogs/create', (req, res)=>{
   res.render('create', {title: 'Create a new Blog'});
});
// 404 page
app.use((req, res) =>{
   res.status(404).render('404', {title: '404'});
});
```

All Blogs

New Blog 2
about my new blog
New Blog
about my new blog

Lesson 10

Get, Post & Delete Requests

Request Types

Request Types

GET requests to get a resource

POST requests to create new data (e.g. a new blog)

DELETE requests to delete data (e.g. delete a blog)

PUT requests to update data (e.g. update a blog)

Request Types		
localhost:3000/blogs	GET	
localhost:3000/blogs/create	GET	
localhost:3000/blogs -> Fill Form	POST	
localhost:3000/blogs/:id	GET	
localhost:3000/blogs/:id	DELETE	
localhost:3000/blogs/:id	PWT	

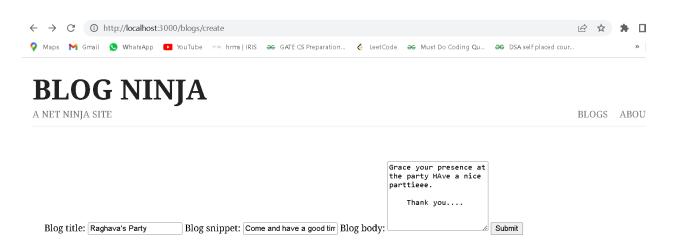
Post Request

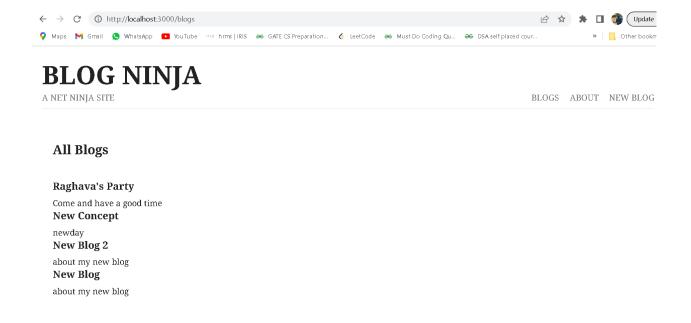
```
const express = require('express');
const morgan = require('morgan');
const mongoose = require('mongoose');
const Blog = require('./models/blog');
// express app
const app = express();
// connect to mongodb
const dbURI =
'mongodb+srv://netninja:test1234@nodetuts.1xigocw.mongodb.net/node-tuts?re
tryWrites=true&w=majority';
//mongoose.connect(dbURI, {        useNewUrlParser: true,        useUnifiedTopology:
true }) //if u see deprecationwarning then use this line
mongoose.connect(dbURI)
 //.then(result => console.log('connected to db'))
  .then(result => app.listen(3000))
  .catch((err) => console.log(err));
//register view engine
app.set('view engine', 'ejs');
// middleware & static files
app.use(express.static('public'));
app.use(express.urlencoded({extended: true}));
app.use(morgan('dev'));
//app.use(morgan('tiny')); //slight change
// routes
app.get('/', (req, res)=>{
    res.redirect('/blogs');
});
```

```
app.get('/about', (req, res)=>{
    res.render('about', {title: 'About'});
});
// blog routes
app.get('/blogs', (req, res) =>{
    Blog.find().sort({ createdAt: -1 }) //descending order
    .then((result) => {
        res.render('index', {title: 'All Blogs', blogs: result })
    })
    .catch((err) => {
        console.log(err);
    });
});
app.post("/blogs", (req, res) =>{
   const blog = new Blog(req.body);
   blog.save()
      .then((result) => {
        res.redirect('/blogs');
      })
      .catch((err) =>{
       console.log(err);
      });
});
app.get('/blogs/create', (req, res)=>{
    res.render('create', {title: 'Create a new Blog'});
});
// 404 page
app.use((req, res) =>{
   res.status(404).render('404', {title: '404'});
});
```

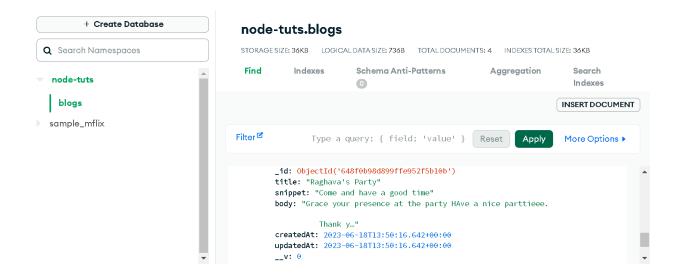
```
<html lang="en">
   <%- include('./partials/head.ejs') %>
<body>
   <%- include('./partials/nav.ejs') %>
   <div class="create-blogs content">
       <form action="/blogs" method="POST">
           <label for="title">Blog title:</label>
           <input type="text" id="title" name="title" required>
           <label for="snippet">Blog snippet:</label>
           <input type="text" id="snippet" name="snippet" required>
           <label for="body">Blog body:</label>
           <textarea id="body" name="body" required></textarea>
       <button>Submit
       </form>
   </div>
   <%- include('./partials/footer.ejs') %>
</body>
 /html>
```

O/P:





MongoDB



Route Parameters

Route Parameters

The variable parts of the route that may change value

localhost:3000/blogs/*.id

localhost:3000/blogs/12345

localhost:3000/blogs/50

localhost:3000/blogs/hello

app.js

```
const express = require('express');
const morgan = require('morgan');
const mongoose = require('mongoose');
const Blog = require('./models/blog');

// express app
const app = express();

// connect to mongodb
const dbURI =
'mongodb+srv://netninja:test1234@nodetuts.1xigocw.mongodb.net/node-tuts?re
tryWrites=true&w=majority';

//mongoose.connect(dbURI, { useNewUrlParser: true, useUnifiedTopology:
true }) //if u see deprecationwarning then use this line
```

```
mongoose.connect(dbURI)
 //.then(result => console.log('connected to db'))
  .then(result => app.listen(3000))
  .catch((err) => console.log(err));
//register view engine
app.set('view engine', 'ejs');
// middleware & static files
app.use(express.static('public'));
app.use(express.urlencoded({extended: true}));
app.use(morgan('dev'));
//app.use(morgan('tiny')); //slight change
// routes
app.get('/', (req, res)=>{
   res.redirect('/blogs');
});
app.get('/about', (req, res)=>{
    res.render('about', {title: 'About'});
});
// blog routes
app.get('/blogs', (req, res) =>{
    Blog.find().sort({ createdAt: -1 }) //descending order
    .then((result) => {
        res.render('index', {title: 'All Blogs', blogs: result })
    .catch((err) => {
        console.log(err);
    });
});
app.post("/blogs", (req, res) =>{
    const blog = new Blog(req.body);
    blog.save()
```

```
.then((result) => {
        res.redirect('/blogs');
      })
      .catch((err) =>{
        console.log(err);
      });
});
app.get('/blogs/:id', (req, res) =>{
    const id = req.params.id;
    Blog.findById(id)
      .then((result) =>{
       res.render('details', { blog: result, title: 'Blog Details' });
      })
      .catch((err)=>{
       console.log(err);
      });
});
app.get('/blogs/create', (req, res)=>{
    res.render('create', {title: 'Create a new Blog'});
});
// 404 page
app.use((req, res) =>{
   res.status(404).render('404', {title: '404'});
```

details.ejs

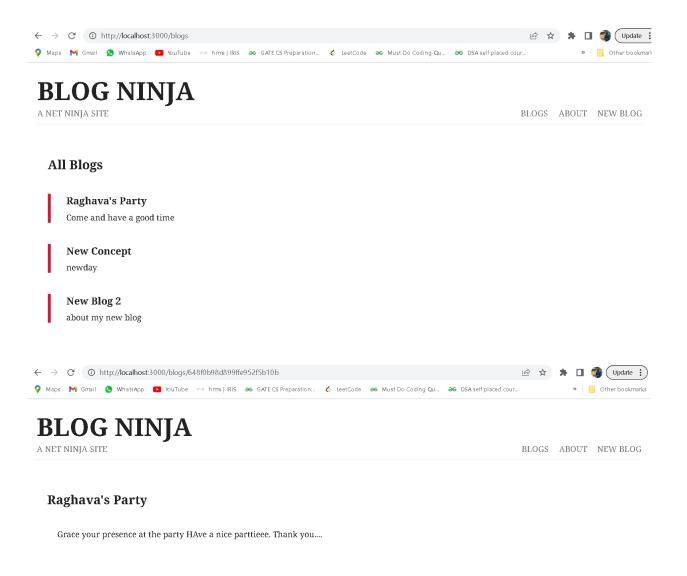
```
<html lang="en">
<%- include("./partials/head.ejs") %>
<body>
    <%- include("./partials/nav.ejs") %>
```

style.css

→Only extra added for index styles

```
/* index styles */
    .blogs a{
        display: block;
        margin: 40px 0;
        padding-left: 30px;
        border-left: 6px solid crimson;
    }
    .blogs a:hover h3{
        color: crimson;
    }
```

O/P:



Delete Requests

app.js

```
const express = require('express');
const morgan = require('morgan');
const mongoose = require('mongoose');
const Blog = require('./models/blog');
```

```
// express app
const app = express();
// connect to mongodb
const dbURI =
'mongodb+srv://netninja:test1234@nodetuts.1xigocw.mongodb.net/node-tuts?re
tryWrites=true&w=majority';
//mongoose.connect(dbURI, {        useNewUrlParser: true,        useUnifiedTopology:
true }) //if u see deprecationwarning then use this line
mongoose.connect(dbURI)
 //.then(result => console.log('connected to db'))
 .then(result => app.listen(3000))
 .catch((err) => console.log(err));
//register view engine
app.set('view engine', 'ejs');
// middleware & static files
app.use(express.static('public'));
app.use(express.urlencoded({extended: true}));
app.use(morgan('dev'));
//app.use(morgan('tiny')); //slight change
// routes
app.get('/', (req, res)=>{
    res.redirect('/blogs');
});
app.get('/about', (req, res)=>{
    res.render('about', {title: 'About'});
});
// blog routes
app.get('/blogs', (req, res) =>{
    Blog.find().sort({ createdAt: -1 }) //descending order
    .then((result) => {
```

```
res.render('index', {title: 'All Blogs', blogs: result })
     })
     .catch((err) => {
        console.log(err);
    });
});
app.post("/blogs", (req, res) =>{
    const blog = new Blog(req.body);
   blog.save()
      .then((result) => {
        res.redirect('/blogs');
      })
      .catch((err) =>{
        console.log(err);
      });
});
app.get('/blogs/:id', (req, res) =>{
    const id = req.params.id;
    Blog.findById(id)
      .then((result) =>{
        res.render('details', { blog: result, title: 'Blog Details' });
      })
      .catch((err)=>{
        console.log(err);
      });
});
app.delete('/blogs/:id', (req, res)=>{
    const id = req.params.id;
    Blog.findByIdAndDelete(id)
      .then((result) =>{
        res.json({ redirect: '/blogs'});
      })
      .catch((err) =>{
        console.log(err);
    });
```

```
app.get('/blogs/create', (req, res)=>{
    res.render('create', {title: 'Create a new Blog'});
});

// 404 page

app.use((req, res) =>{
    res.status(404).render('404', {title: '404'});
});
```

details.ejs

```
<html lang="en">
<%- include("./partials/head.ejs") %>
<body>
 <%- include("./partials/nav.ejs") %>
 <div class="details content">
   <h2><%= blog.title %></h2>
   <div class="content">
     <%= blog.body %>
   </div>
   <a class="delete" data-doc="<%= blog. id %>">delete</a>
 </div>
 <%- include("./partials/footer.ejs") %>
 <script>
   const trashcan = document.querySelector('a.delete');
   trashcan.addEventListener('click', (e) => {
     const endpoint = `/blogs/${trashcan.dataset.doc}`;
     fetch(endpoint, {
       method: 'DELETE',
     })
```

```
.then((response) => response.json())
.then((data) => window.location.href = data.redirect)
.catch((err) => console.log(err));
});

</script>
</body>
</html>
```

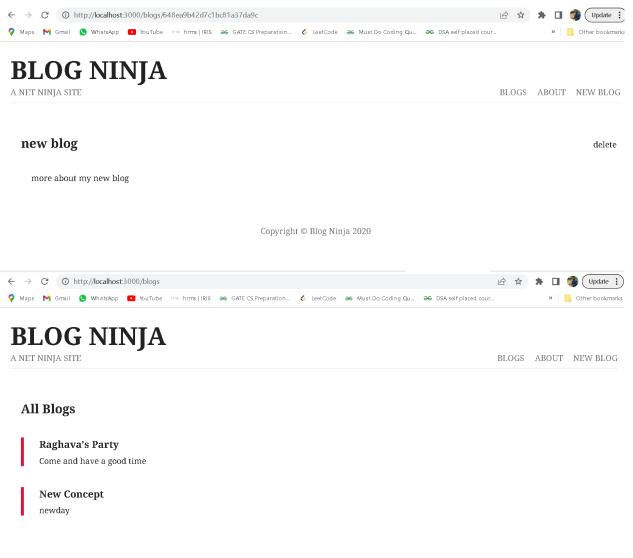
style.css

→Only extra added for details stye

```
/* details styles */
    .details{
        position: relative;
    }
    .delete{
        position: absolute;
        top: 0;
        right: 0;
        border-radius: 50%;
        padding: 8px;
    }
    .delete:hover{
        cursor: pointer;
        box-shadow: 1px 2px 3px rgba(0,0,0,0.2);
}
```

O/P:

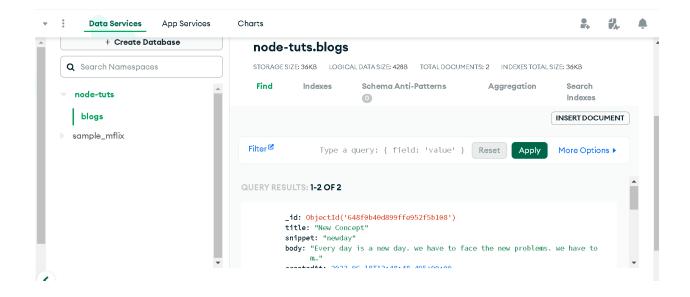
→Delete operation is working



Copyright © Blog Ninja 2020

\rightarrow MongoDb

Initially 4 out 4 are available after the deletion we have only 2



Lesson 11

Express Router & MVC

Express:

app.js

```
const express = require('express');
const morgan = require('morgan');
const mongoose = require('mongoose');
const blogRoutes = require('./routes/blogRoutes');
// express app
const app = express();
// connect to mongodb
const dbURI =
'mongodb+srv://netninja:test1234@nodetuts.1xigocw.mongodb.net/node-tuts?re
tryWrites=true&w=majority';
//mongoose.connect(dbURI, {        useNewUrlParser: true,        useUnifiedTopology:
true }) //if u see deprecationwarning then use this line
mongoose.connect(dbURI)
 //.then(result => console.log('connected to db'))
  .then(result => app.listen(3000))
  .catch((err) => console.log(err));
//register view engine
app.set('view engine', 'ejs');
// middleware & static files
app.use(express.static('public'));
app.use(express.urlencoded({extended: true}));
app.use(morgan('dev'));
//app.use(morgan('tiny')); //slight change
// routes
app.get('/', (req, res)=>{
    res.redirect('/blogs');
});
```

```
app.get('/about', (req, res)=>{
    res.render('about', {title: 'About'});
});

// blog routes
app.use('/blogs', blogRoutes);

// 404 page
app.use((req, res) =>{
    res.status(404).render('404', {title: '404'});
});
```

routes → blogRoutes.js

blogRoutes.js

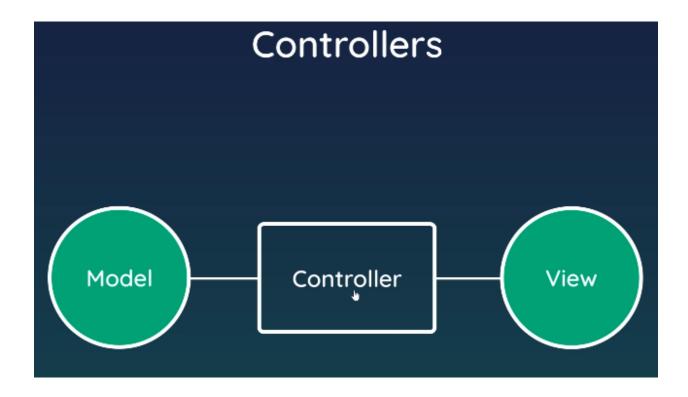
```
const express = require('express');
const Blog = require('../models/blog');
const router = express.Router();
// blog routes
router.get('/', (req, res) =>{
   Blog.find().sort({ createdAt: -1 }) //descending order
    .then((result) => {
        res.render('index', {title: 'All Blogs', blogs: result })
     })
     .catch((err) => {
        console.log(err);
    });
});
router.post('/', (req, res) =>{
    const blog = new Blog(req.body);
   blog.save()
      .then((result) => {
       res.redirect('/blogs');
      })
```

```
.catch((err) =>{
        console.log(err);
      });
});
router.get('/create', (req, res)=>{
 res.render('create', {title: 'Create a new Blog'});
});
router.get('/:id', (req, res) =>{
    const id = req.params.id;
   Blog.findById(id)
      .then((result) =>{
        res.render('details', { blog: result, title: 'Blog Details' });
      })
      .catch((err)=>{
       console.log(err);
      });
});
router.delete('/:id', (req, res)=>{
    const id = req.params.id;
   Blog.findByIdAndDelete(id)
      .then((result) =>{
       res.json({ redirect: '/blogs'});
      })
      .catch((err) =>{
        console.log(err);
    });
});
module.exports = router;
```

MVC Basics

MVC Basics

- Stands for Model, View, Controller
- MVC is a way of structuring our code & files
- Keeps code more modular, reusable & easier to read



$Controllers {\rightarrow} blog Controller.js$

blogController.js

```
// blog_index, blog_details, blog_create_get, blog_create_post,
blog_delete
const Blog = require('../models/blog');
```

```
const blog_index = (req, res) => {
 Blog.find().sort({ createdAt: -1 })
    .then(result => {
      res.render('blogs/index', { blogs: result, title: 'All blogs' });
    })
    .catch(err => {
     console.log(err);
    });
const blog details = (req, res) => {
 const id = req.params.id;
 Blog.findById(id)
    .then(result => {
     res.render('blogs/details', { blog: result, title: 'Blog Details'
});
    })
    .catch(err => {
     console.log(err);
    });
const blog create get = (req, res) => {
 res.render('blogs/create', { title: 'Create a new blog' });
const blog create post = (req, res) => {
 const blog = new Blog(req.body);
 blog.save()
    .then(result => {
     res.redirect('/blogs');
    })
    .catch(err => {
     console.log(err);
    });
const blog_delete = (req, res) => {
 const id = req.params.id;
```

```
Blog.findByIdAndDelete(id)
    .then(result => {
        res.json({ redirect: '/blogs' });
    })
    .catch(err => {
        console.log(err);
    });
}

module.exports = {
    blog_index,
    blog_details,
    blog_create_get,
    blog_create_post,
    blog_delete
}
```

blogRoutes.js

```
const express = require('express');
const blogController = require('../controllers/blogController');

const router = express.Router();

// blog routes
router.get('/', blogController.blog_index);
router.post('/', blogController.blog_create_post);
router.get('/create', blogController.blog_create_get);
router.get('/create', blogController.blog_details);
router.get('/:id', blogController.blog_details);
router.delete('/:id', blogController.blog_delete);

module.exports = router;
```

Lesson 12

WrapUp

blogController.js

```
// blog index, blog details, blog create get, blog create post,
blog delete
const Blog = require('../models/blog');
const blog index = (req, res) => {
 Blog.find().sort({ createdAt: -1 })
    .then(result => {
     res.render('blogs/index', { blogs: result, title: 'All blogs' });
    })
    .catch(err => {
     console.log(err);
    });
const blog details = (req, res) => {
 const id = req.params.id;
 Blog.findById(id)
    .then(result => {
     res.render('blogs/details', { blog: result, title: 'Blog Details'
});
    })
    .catch(err => {
     res.status(404).render('404', { title: 'Blog not found' });
    });
const blog_create_get = (req, res) => {
 res.render('blogs/create', { title: 'Create a new blog' });
const blog_create_post = (req, res) => {
 const blog = new Blog(req.body);
 blog.save()
```

```
.then(result => {
      res.redirect('/blogs');
    })
    .catch(err => {
      console.log(err);
    });
const blog_delete = (req, res) => {
 const id = req.params.id;
 Blog.findByIdAndDelete(id)
    .then(result => {
      res.json({ redirect: '/blogs' });
    })
    .catch(err => {
     console.log(err);
    });
module.exports = {
 blog_index,
 blog_details,
 blog_create_get,
 blog_create_post,
 blog_delete
```

details.js

```
</div>
   <a class="delete" data-doc="<%= blog. id %>">
     <img src="/trashcan.svg" alt="delete icon">
   </a>
 </div>
 <%- include("../partials/footer.ejs") %>
 <script>
   const trashcan = document.querySelector('a.delete');
   trashcan.addEventListener('click', (e) => {
     const endpoint = `/blogs/${trashcan.dataset.doc}`;
     fetch(endpoint, {
       method: 'DELETE',
     .then((response) => response.json())
     .then((data) => window.location.href = data.redirect)
     .catch((err) => console.log(err));
   });
 </script>
</body>
</html>
```

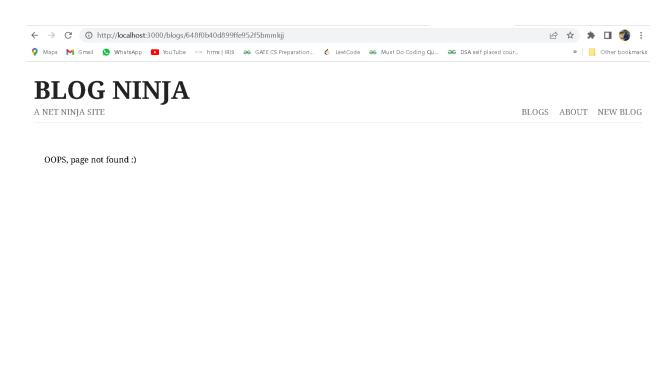
public → trashcan.svg

trashcan.svg

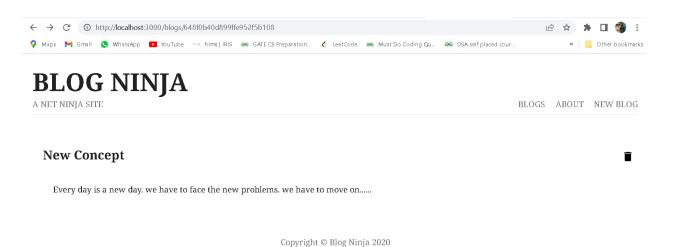
```
<svg xmlns="http://www.w3.org/2000/svg" height="24" viewBox="0 0 24 24"
width="24"><path d="M6 19c0 1.1.9 2 2 2h8c1.1 0 2-.9 2-2V7H6v12zM19
4h-3.5l-1-1h-5l-1 1H5v2h14V4z"/><path d="M0 0h24v24H0z"
fill="none"/></svg>
```

O/P:

→If the "id" is changed then page not found



→Delete icon is added



Future Courses

- Node.js with Firebase Admin
- Node.js authentication
- Handling payments with Node.js & Stripe
- Full stack project course (with either Vue or React)