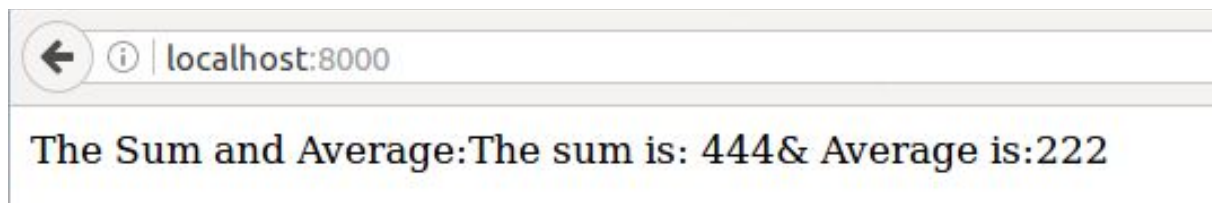


## Node.js Exercise 1

1, Create a custom module which returns the sum and average of any two numbers passed into it. Require the module and run the server by passing 123 and 321 so that the server prints out the sum and average.

```
Nodejsexercise.js x addsum.js x firstnode.js x summodule.js x
1 var http = require('http');
2 var sums = require('./summodule')
3 http.createServer(function (req, res) {
4   res.writeHead(200, {'Content-Type': 'text/html'});
5   res.write('Sum of two numbers is : ' + sums.sumAndAverage(123, 321));
6   res.end();
7 }).listen(8000);
8
```

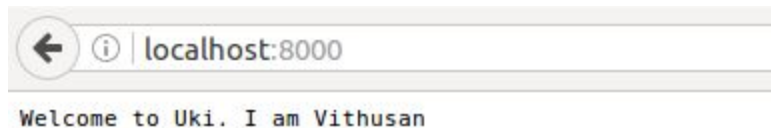
```
ukistu13@ukipc13:~/Documents/uki4/programming/backend/Nodejs$ nodemon addsum.js
[nodemon] 1.17.1
[nodemon] to restart at any time, enter `rs`
[nodemon] watching: *.*
[nodemon] starting `node addsum.js`
[nodemon] restarting due to changes...
[nodemon] starting `node addsum.js`
```



2, Create a simple http server and print “Welcome to Uki. I am **yourname**” when a request is sent to your server via the port 8000. (Note - Change different port numbers and check)

```
Nodejsexercise.js x
1 var http = require('http');
2
3 http.createServer(function (req, res) {
4
5   res.write('Welcome to Uki. I am Vithusan');
6
7   res.end();
8
9 }).listen(8000);
```

```
ukistul3@ukipc13:~/Documents/uki4/programming/backend/Nodejs$ nodemon Nodejsexercise.js
[nodemon] 1.17.1
[nodemon] to restart at any time, enter `rs`
[nodemon] watching: *.*
[nodemon] starting `node Nodejsexercise.js`
```



← ⓘ | localhost:8000

Welcome to Uki. I am Vithusan

3, Using the file system module create a new file called ukinode.txt

3.1 Write a paragraph about Uki into that file

```
Nodejsexercise.js x addsum.js firstnode.js x summodule.js x create.js x
1 var fs = require('fs');
2
3 fs.appendFile('ukinode.txt', 'It is a full scholarship based Accelerator program for Coding in Jaffna.', function (err) {
4   if (err) throw err;
5   console.log('Saved!');
6 });
7
```

```
ukistu13@ukipc13: ~/Documents/uki4/programming/backend/Nodejs
ukistu13@ukipc13:~/Documents/uki4/programming/backend/Nodejs$ nodemon create.js
[nodemon] 1.17.1
[nodemon] to restart at any time, enter `rs`
[nodemon] watching: *.*
[nodemon] starting `node create.js`
Saved!
[nodemon] clean exit - waiting for changes before restart
```

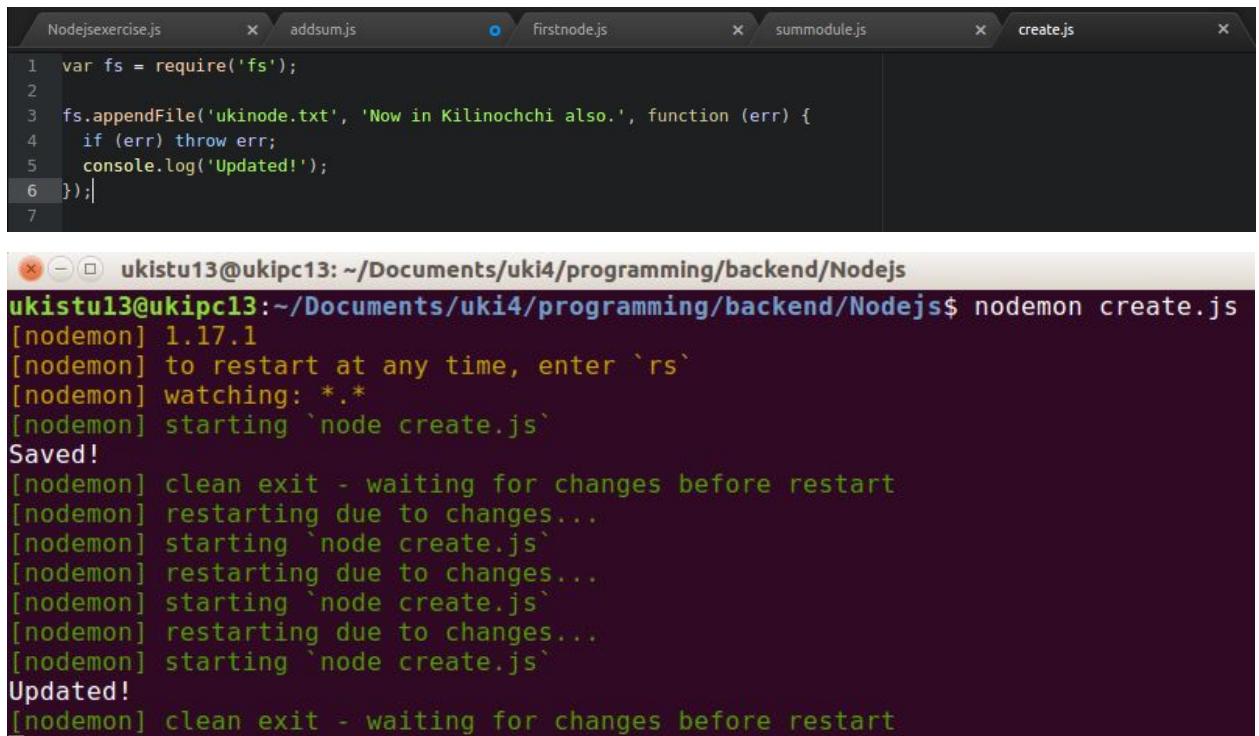
3.2 Serve that file to the client (Read File) over your server

```
Nodejsexercise.js x addsum.js firstnode.js x summodule.js x create.js x
1 var http = require('http');
2 var fs = require('fs');
3 http.createServer(function (req, res) {
4   fs.readFile('ukinode.txt', function(err, data) {
5     res.writeHead(200, {'Content-Type': 'text/html'});
6     res.write(data);
7     res.end();
8   });
9 }).listen(8000)
10
```

```
ukistu13@ukipc13: ~/Documents/uki4/programming/backend/Nodejs
ukistu13@ukipc13:~/Documents/uki4/programming/backend/Nodejs$ nodemon create.js
[nodemon] 1.17.1
[nodemon] to restart at any time, enter `rs`
[nodemon] watching: *.*
[nodemon] starting `node create.js`
Saved!
[nodemon] clean exit - waiting for changes before restart
[nodemon] restarting due to changes...
[nodemon] starting `node create.js`
[nodemon] restarting due to changes...
[nodemon] starting `node create.js`
```



### 3.3 Append another paragraph about Uki and now serve the new file



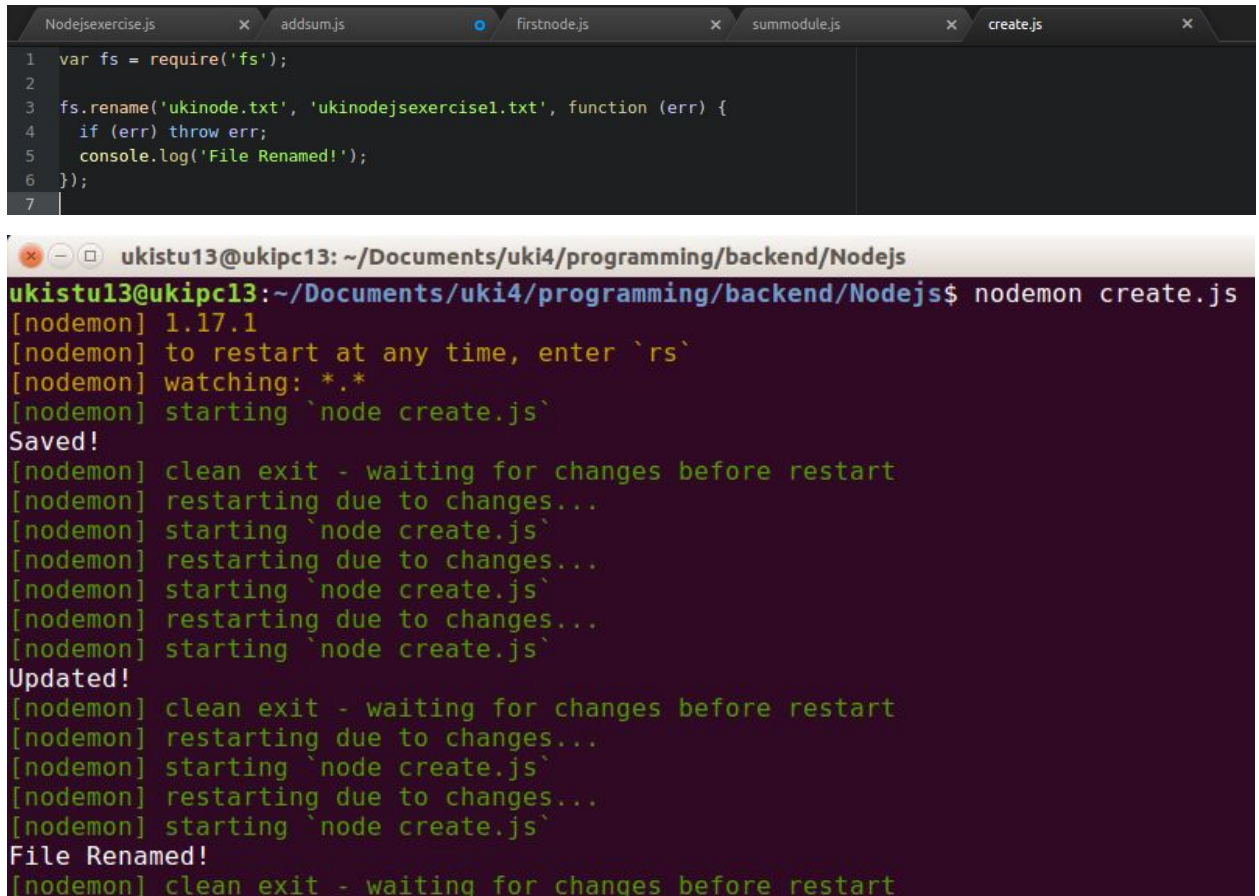
The image shows a code editor with five tabs: Nodejsexercise.js, addsum.js, firstnode.js, summodule.js, and create.js. The 'create.js' tab is active, displaying the following JavaScript code:

```
1 var fs = require('fs');
2
3 fs.appendFile('ukinode.txt', 'Now in Kilinochchi also.', function (err) {
4   if (err) throw err;
5   console.log('Updated!');
6 });
7
```

Below the code editor is a terminal window with the title bar 'ukistu13@ukipc13: ~/Documents/uki4/programming/backend/Nodejs'. The terminal shows the command 'nodemon create.js' being executed. The output of the terminal is as follows:

```
ukistu13@ukipc13:~/Documents/uki4/programming/backend/Nodejs$ nodemon create.js
[nodemon] 1.17.1
[nodemon] to restart at any time, enter `rs`
[nodemon] watching: *.*
[nodemon] starting `node create.js`
Saved!
[nodemon] clean exit - waiting for changes before restart
[nodemon] restarting due to changes...
[nodemon] starting `node create.js`
[nodemon] restarting due to changes...
[nodemon] starting `node create.js`
[nodemon] restarting due to changes...
[nodemon] starting `node create.js`
Updated!
[nodemon] clean exit - waiting for changes before restart
```

### 3.4 Rename the file as ukinodejsexercise1.txt



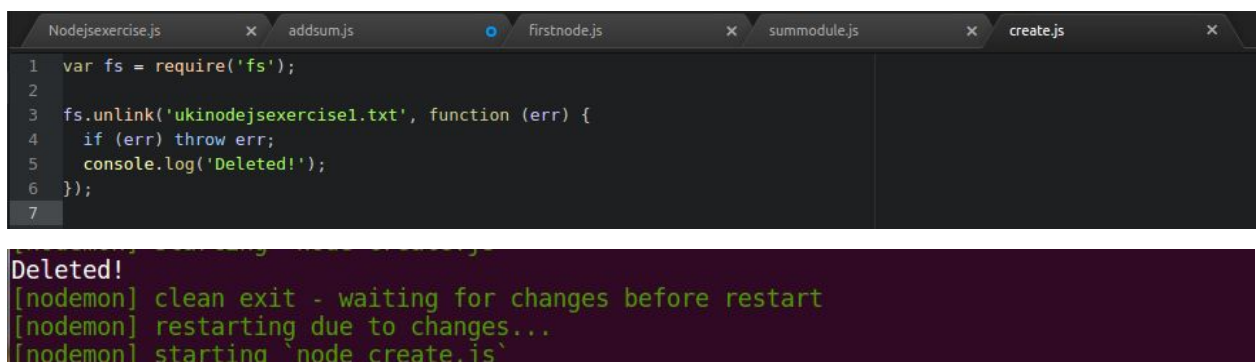
The screenshot shows a code editor with a file named `Nodejsexercise.js` containing the following JavaScript code:

```
1 var fs = require('fs');
2
3 fs.rename('ukinode.txt', 'ukinodejsexercise1.txt', function (err) {
4   if (err) throw err;
5   console.log('File Renamed!');
6 });
7
```

Below the code editor is a terminal window with the title `ukistu13@ukipc13: ~/Documents/uki4/programming/backend/Nodejs`. The terminal shows the command `nodemon create.js` being executed. The output of the terminal is as follows:

```
ukistu13@ukipc13:~/Documents/uki4/programming/backend/Nodejs$ nodemon create.js
[nodemon] 1.17.1
[nodemon] to restart at any time, enter `rs`
[nodemon] watching: *.*
[nodemon] starting `node create.js`
Saved!
[nodemon] clean exit - waiting for changes before restart
[nodemon] restarting due to changes...
[nodemon] starting `node create.js`
[nodemon] restarting due to changes...
[nodemon] starting `node create.js`
[nodemon] restarting due to changes...
[nodemon] starting `node create.js`
Updated!
[nodemon] clean exit - waiting for changes before restart
[nodemon] restarting due to changes...
[nodemon] starting `node create.js`
[nodemon] restarting due to changes...
[nodemon] starting `node create.js`
File Renamed!
[nodemon] clean exit - waiting for changes before restart
```

### 3.5 Delete the file you created



The screenshot shows a code editor with a file named `Nodejsexercise.js` containing the following JavaScript code:

```
1 var fs = require('fs');
2
3 fs.unlink('ukinodejsexercise1.txt', function (err) {
4   if (err) throw err;
5   console.log('Deleted!');
6 });
7
```

Below the code editor is a terminal window with the title `ukistu13@ukipc13: ~/Documents/uki4/programming/backend/Nodejs`. The terminal shows the command `nodemon create.js` being executed. The output of the terminal is as follows:

```
ukistu13@ukipc13:~/Documents/uki4/programming/backend/Nodejs$ nodemon create.js
[nodemon] 1.17.1
[nodemon] to restart at any time, enter `rs`
[nodemon] watching: *.*
[nodemon] starting `node create.js`
Deleted!
[nodemon] clean exit - waiting for changes before restart
[nodemon] restarting due to changes...
[nodemon] starting `node create.js`
```

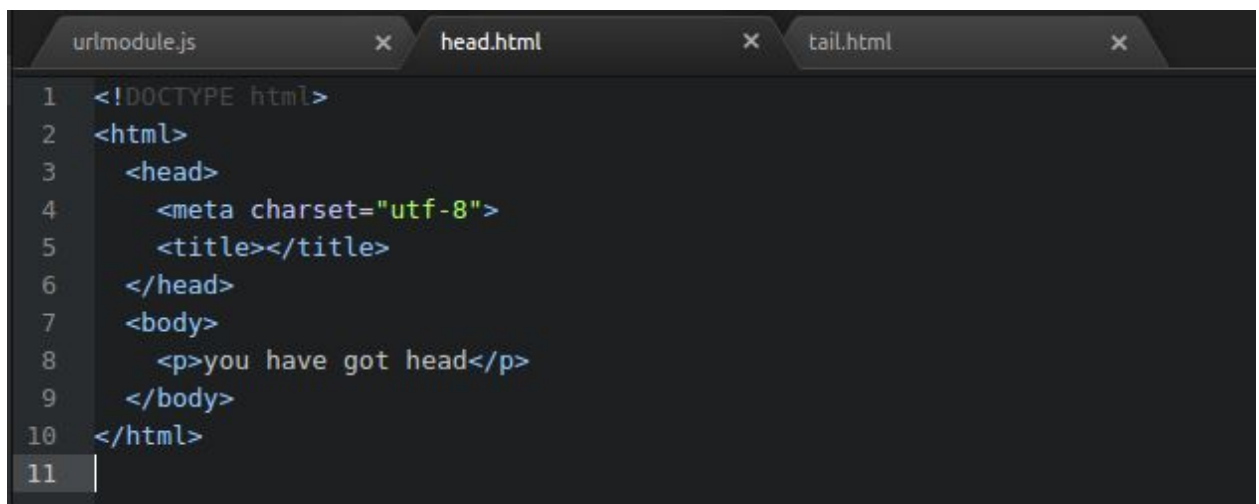


4. Create two html files called head.html which is a web page which says 'you have got head ' and tail.html which is a web page which says 'you have got tail' and save them in the same folder as your node.js files. Create a Node.js file that opens the requested file and returns the content to the client. If anything goes wrong, throw a 404 error.

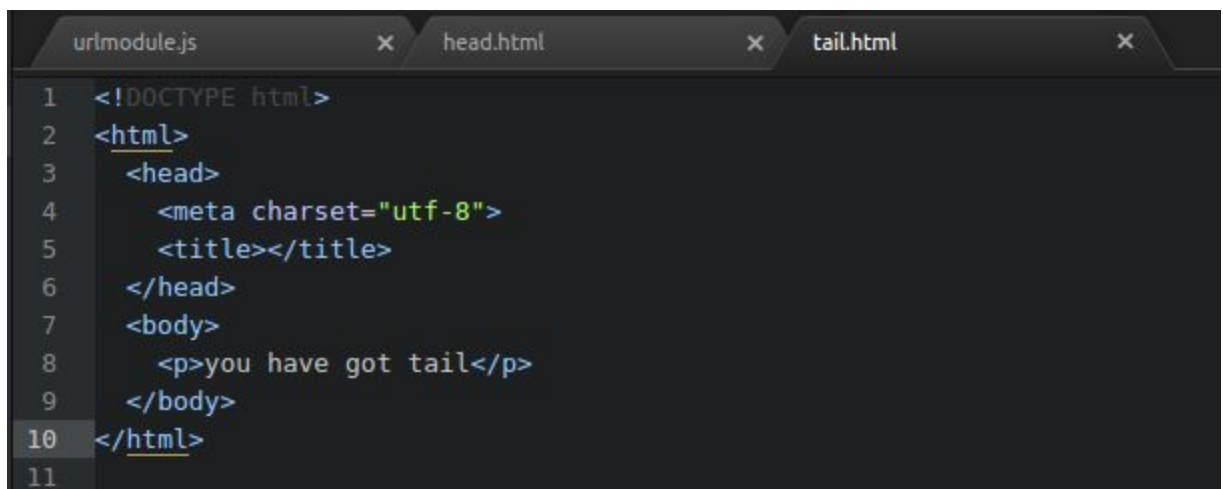
If you have followed the correct steps you should see two different results when opening these two addresses:

<http://localhost:8080/head.html> - > You have got head

<http://localhost:8080/tail.html> -> You have got tail

A screenshot of a code editor with three tabs: 'urlmodule.js', 'head.html', and 'tail.html'. The 'head.html' tab is active, showing an HTML document. The code is as follows:

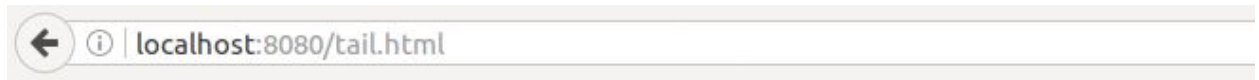
```
1 <!DOCTYPE html>
2 <html>
3   <head>
4     <meta charset="utf-8">
5     <title></title>
6   </head>
7   <body>
8     <p>you have got head</p>
9   </body>
10  </html>
11
```

A screenshot of a code editor with three tabs: 'urlmodule.js', 'head.html', and 'tail.html'. The 'tail.html' tab is active, showing an HTML document. The code is as follows:

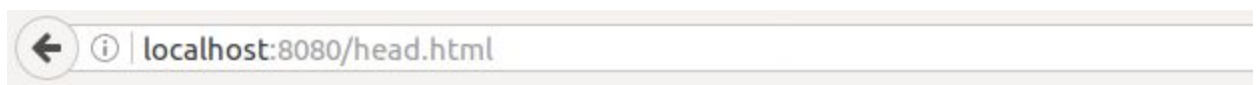
```
1 <!DOCTYPE html>
2 <html>
3   <head>
4     <meta charset="utf-8">
5     <title></title>
6   </head>
7   <body>
8     <p>you have got tail</p>
9   </body>
10  </html>
11
```

```
urlmodule.js  x  head.html  x  tail.html  x
1  var http = require('http');
2  var url = require('url');
3  var fs = require('fs');
4
5  http.createServer(function (req, res) {
6    var q = url.parse(req.url, true);
7    var filename = "." + q.pathname;
8    fs.readFile(filename, function(err, data) {
9      if (err) {
10        res.writeHead(404, {'Content-Type': 'text/html'});
11        return res.end("404 Not Found");
12      }
13      res.writeHead(200, {'Content-Type': 'text/html'});
14      res.write(data);
15      return res.end();
16    });
17  }).listen(8080); |
18
```

```
ukistu13@ukipc13: ~/Documents/uki4/programming/backend/Nodejs/node.js
ukistu13@ukipc13:~/Documents/uki4/programming/backend/Nodejs/node.js$ nodemon urlmodule.js
[nodemon] 1.17.1
[nodemon] to restart at any time, enter `rs`
[nodemon] watching: *.*
[nodemon] starting `node urlmodule.js`
```



you have got tail



you have got head

5. Install the package “upper-case” using NPM and create a Node.js file that will convert the output "Uki is the best place to learn programming !" into upper-case letters.

```
ukistu13@ukipc13: ~/Documents/uki4/programming/backend/Nodejs
ukistu13@ukipc13:~/Documents/uki4/programming/backend/Nodejs$ npm install upper-
case -g
npm WARN checkPermissions Missing write access to /usr/local/lib/node_modules
/usr/local/lib
└─ upper-case@1.1.3
```

```
[nodemon] 1.17.1
[nodemon] to restart at any time, enter `rs`
[nodemon] watching: *.*
[nodemon] starting `node uc.js`
[nodemon] clean exit - waiting for changes before restart
[nodemon] restarting due to changes...
[nodemon] starting `node uc.js`
```

```
var http = require('http');
var uc = require('upper-case');
http.createServer(function (req, res) {
  res.writeHead(200, {'Content-Type': 'text/html'});
  res.write(uc("Uki is the best place to learn programming!"));
  res.end();
}).listen(8080);
```

```
localhost:8080/head.html 170% Search
```

UKI IS THE BEST PLACE TO LEARN PROGRAMMING!



6. Create an event handler function that will say "I bark when I see strangers !" when a "bark" event is fire

```
uc.js  x  mail.js  event.js  x
1  var events = require('events');
2  var EventEmitter = new events.EventEmitter();
3  var myEventHandler = function () {
4  console.log('I bark when I see strangers !');
5  }
6  EventEmitter.on('bark', myEventHandler);
7  EventEmitter.emit('bark');
```

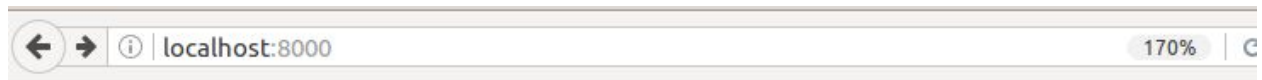
```
ukistu13@ukipc13:~/Documents/uki4/programming/backend/Nodejs$ nodemon event.js
[nodemon] 1.17.1
[nodemon] to restart at any time, enter `rs`
[nodemon] watching: *.*
[nodemon] starting `node event.js`
I bark when I see strangers !
[nodemon] clean exit - waiting for changes before restart
```

7. Install "formidable" module using npm and make a web page in Node.js that lets the user upload files to your computer.

7.1 Save that uploaded file into your Documents directory.

```
uc.js x mail.js event.js formidable.js x
1 var http = require('http');
2 var formidable = require('formidable');
3 var fs = require('fs');
4
5 http.createServer(function (req, res) {
6   if (req.url == '/fileupload') {
7     var form = new formidable.IncomingForm();
8     form.parse(req, function (err, fields, files) {
9       var oldpath = files.filetoupload.path;
10      var newpath = '/home/ukistu13/Documents/uki4/programming/backend/Nodejs/' + files.filetoupload.name;
11      fs.rename(oldpath, newpath, function (err) {
12        if (err) throw err;
13        res.write('File uploaded and moved!');
14        res.end();
15      });
16    });
17   } else {
18     res.writeHead(200, {'Content-Type': 'text/html'});
19     res.write('<form action="fileupload" method="post" enctype="multipart/form-data">');
20     res.write('<input type="file" name="filetoupload"><br>');
21     res.write('<input type="submit">');
22     res.write('</form>');
23     return res.end();
24   }
25 }).listen(8000);
26
```

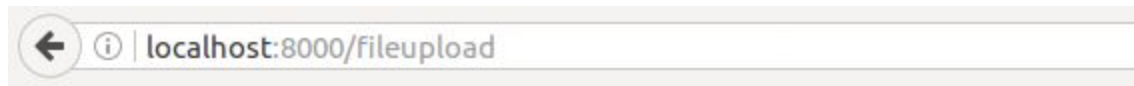
```
ukistu13@ukipc13: ~/Documents/uki4/programming/backend/Nodejs
ukistu13@ukipc13:~/Documents/uki4/programming/backend/Nodejs$ nodemon formidable.js
[nodemon] 1.17.1
[nodemon] to restart at any time, enter `rs`
[nodemon] watching: *.*
[nodemon] starting `node formidable.js`
[nodemon] restarting due to changes...
[nodemon] starting `node formidable.js`
```



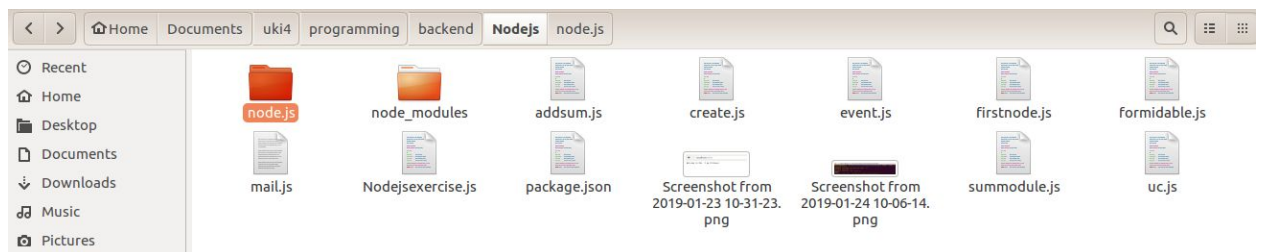
Browse...

Screenshot from 2019-01-24 10-06-14.png

Submit Query



File uploaded and moved!



8. Using the Nodemailer module create a server and send a mail to info@uki.life with the subject : “Testing my nodemailer module” , text: “This is easy !”

```
uc.js x mail.js event.js formidable.js x
1 var nodemailer = require('nodemailer');
2
3 var transporter = nodemailer.createTransport({
4   service: 'gmail',
5   auth: {
6     user: 'sreevithusan@gmail.com',
7     pass: 'xxxxxx'
8   }
9 });
10
11 var mailOptions = {
12   from: 'sreevithusan@gmail.com',
13   to: 'info@uki.life',
14   subject: 'Testing my nodemailer module',
15   html: '<p>That is easy!</p>'
16 };
17
18 transporter.sendMail(mailOptions, function(error, info){
19   if (error) {
20     console.log(error);
21   } else {
22     console.log('Email sent: ' + info.response);
23   }
24 });
25
```

```
ukistu13@ukipc13: ~/Documents/uki4/programming/backend/Nodejs
ukistu13@ukipc13:~/Documents/uki4/programming/backend/Nodejs$ nodemon mail.js
[nodemon] 1.17.1
[nodemon] to restart at any time, enter `rs`
[nodemon] watching: *.*
[nodemon] starting `node mail.js`
{ Error: queryA EREFUSED smtp.gmail.com
  at errnoException (dns.js:28:10)
  at QueryReqWrap.onresolve [as oncomplete] (dns.js:216:19)
  code: 'EDNS',
  errno: 'EREFUSED',
  syscall: 'queryA',
  hostname: 'smtp.gmail.com',
  command: 'CONN' }
[nodemon] clean exit - waiting for changes before restart
```



## Sign-in attempt was blocked



sreevithusan@gmail.com

---

Someone just used your password to try to sign in to your account from a non-Google app. Google blocked them, but you should check what happened. Review your account activity to make sure no one else has access.

[Check activity](#)