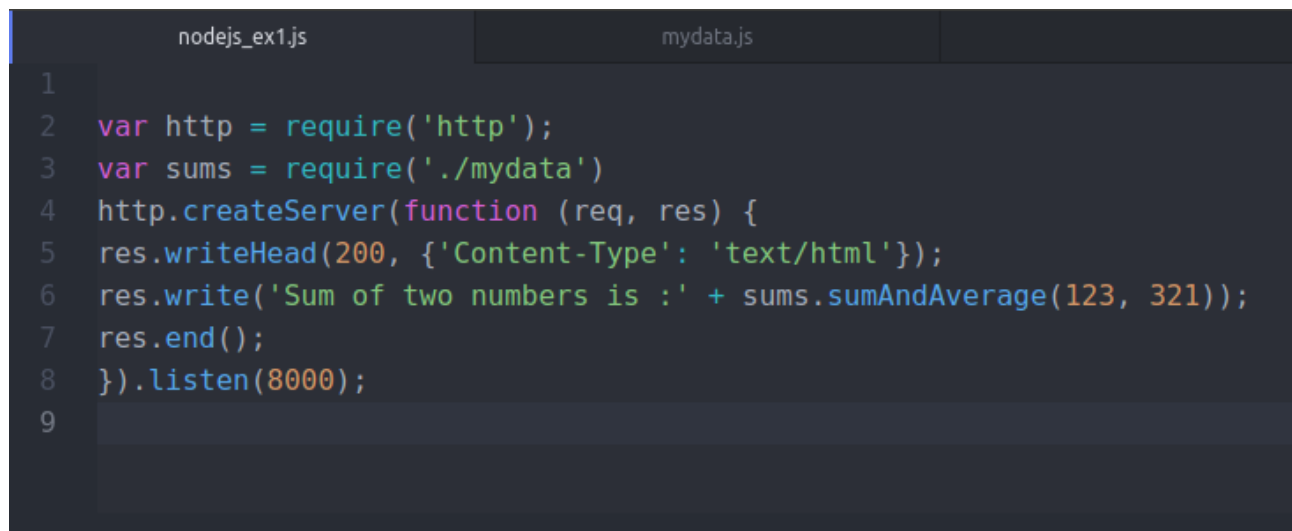


1. Create a custom module which returns the sum and average of any two numbers passed into it. Require the module and run the server by passing 123 and 321 so that the server prints out the sum and average.

```
var http = require('http');
var sums = require('./mydata')
http.createServer(function (req, res) {
  res.writeHead(200, {'Content-Type': 'text/html'});
  res.write('Sum of two numbers is : ' + sums.sumAndAverage(123, 321));
  res.end();
}).listen(8000);
```

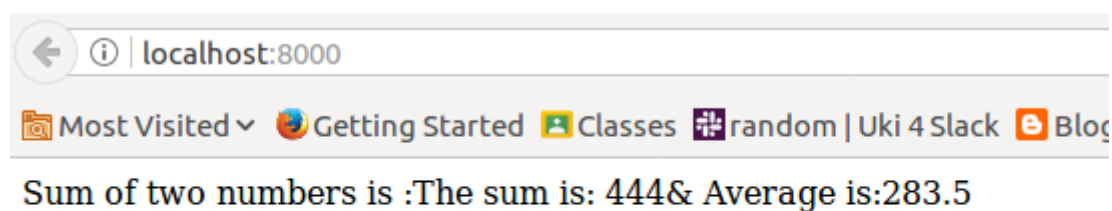
```
exports.sumAndAverage = function(a,b){
  var sum = a+b;
  var avg = a+b/2
  return 'The sum is: ' + sum + "& Average is:" + avg
}
```



```
nodejs_ex1.js  mydata.js

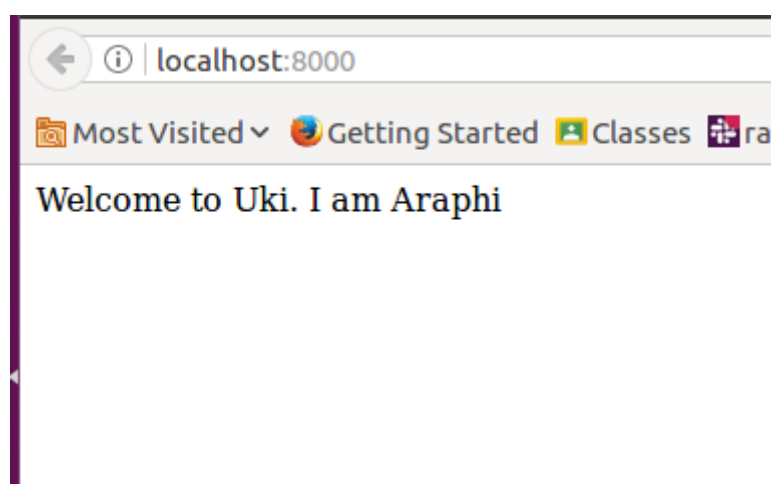
1
2 var http = require('http');
3 var sums = require('./mydata')
4 http.createServer(function (req, res) {
5   res.writeHead(200, {'Content-Type': 'text/html'});
6   res.write('Sum of two numbers is : ' + sums.sumAndAverage(123, 321));
7   res.end();
8 }).listen(8000);
9
```

```
nodejs_ex1.js | mydata.js
1 exports.sumAndAverage = function(a,b){
2   var sum = a+b;
3   var avg = a+b/2
4   return 'The sum is: ' + sum + "& Average is:" + avg
5
6 }
7
```



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)

```
var http = require('http');
http.createServer(function (req, res) {
  res.writeHead(200, {'Content-Type': 'text/html'});
  res.write('Welcome to Uki. I am Araphi');
  res.end();
}).listen(8000);
```



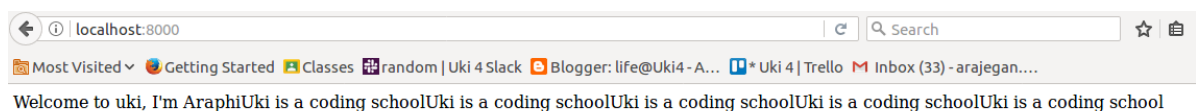
3. Using the file system module create a new file called ukinode.txt
  - 3.1 Write a paragraph about Uki into that file

nodejs_q3.js	ukinode.txt
<pre>1 var fs = require("fs"); 2 fs.appendFile('ukinode.txt', 'Uki is a coding school', 3 function (err) { 4   if (err) throw err; 5   console.log('Saved!'); 6 }); 7</pre>	

nodejs_q3.js	ukinode.txt
<pre>1 Uki is a coding school</pre>	

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

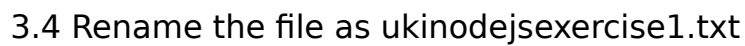
```
nodejs3.2.js
1 var http = require('http')
2 var fs = require('fs')
3 http.createServer(function(req, res){
4   fs.readFile('ukinode.txt', function(err, data){
5     res.writeHead(200, {'Content-type': 'text/html'});
6     res.write("Welcome to uki, I'm Araphi");
7     res.write(data);
8     res.end();
9   });
10 }).listen(8000)
11
```



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

```
var fs = require('fs');
fs.appendFile('ukinode.txt', 'uki is situvated in Nallur,Jaffna. It is a full
stack development course for 6 months.There are two clubs. They are
gavel club and fitness club.',
function (err){
  if (err) throw err;
  console.log('Updated!');
});
```

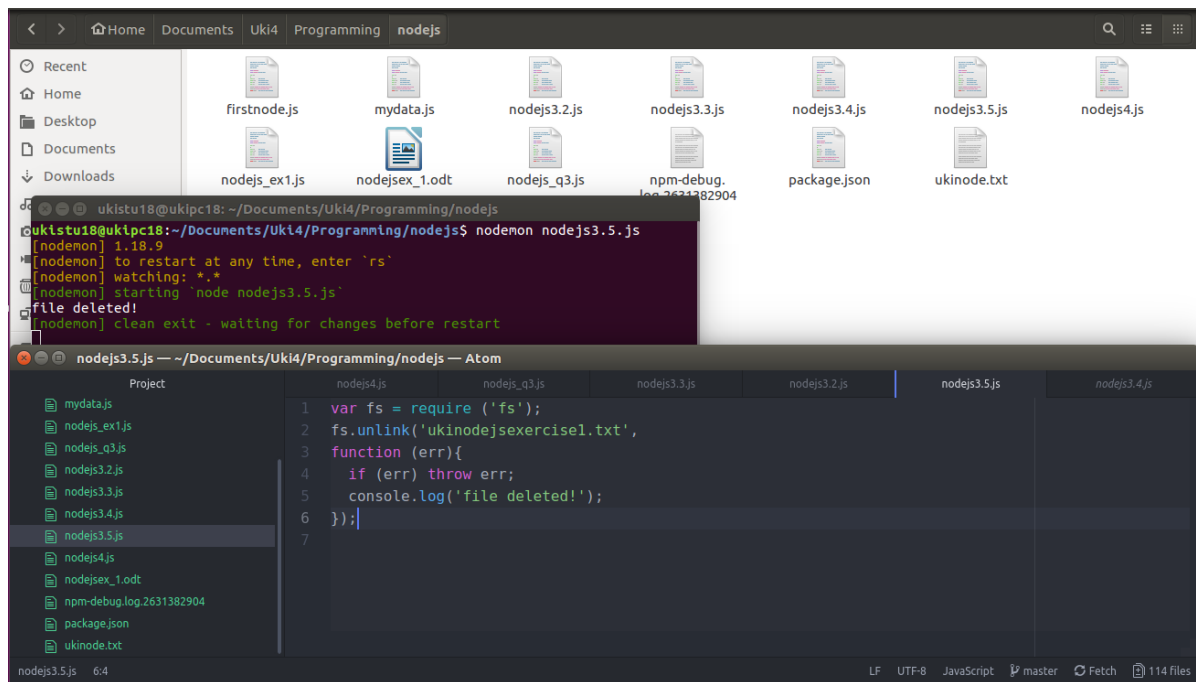
```
nodejs3.3.js
1 var fs = require('fs');
2 fs.appendFile('ukinode.txt', 'uki is situvated in Nallur,Jaffna. It is a full stack devel
3 function (err){
4   if (err) throw err;
5   console.log('Updated!');
6 };
7
```



```
nodejs3.4.js      ukinodejsexercise1.txt
```

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

### 3.5 Delete the file you created



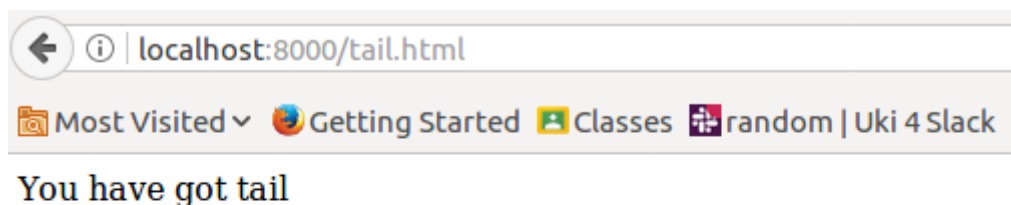
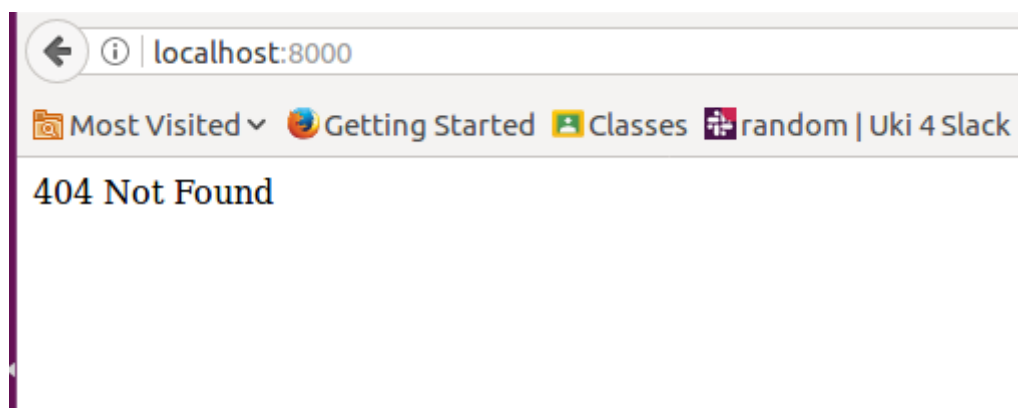
4. Create two html files called head.html which is a web page which says 'you have got head ' and tail.html which is a web page which says 'you have got tail' and save them in the same folder as your node.js files. Create a Node.js file that opens the requested file and returns the content to the client.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

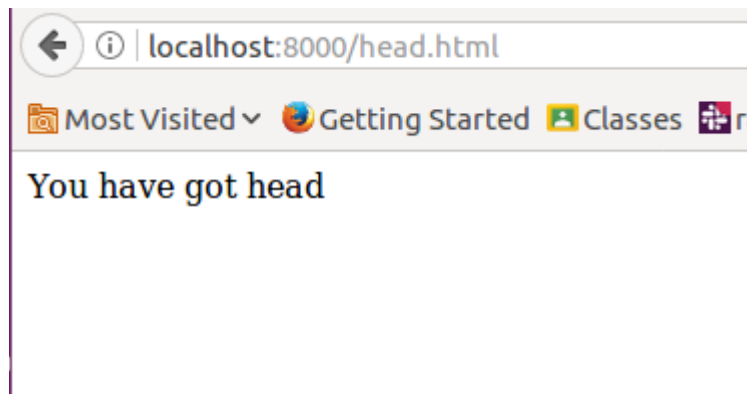
If you have followed the correct steps you should see two different results when opening these two addresses:

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

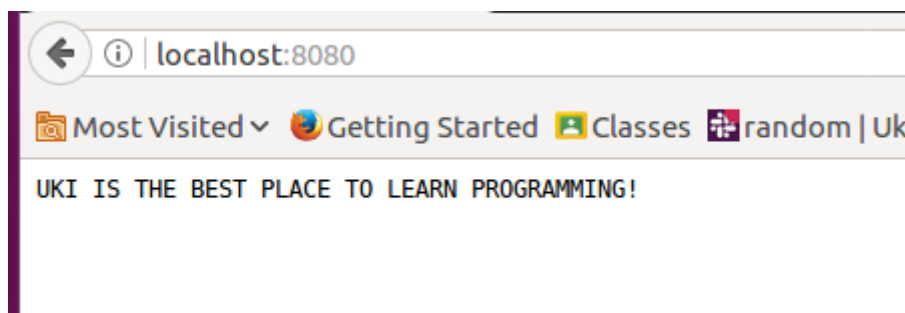
<http://localhost:8080/tail.html> -> You have got tail

head.html	tail.html	nodejs4.js
<pre>1 var http = require('http'); 2 var url = require('url'); 3 var fs = require('fs');http.createServer(function (req, res) { 4   var q = url.parse(req.url, true); 5   var filename = "." + q.pathname; 6   fs.readFile(filename, function(err, data) { 7     if (err) { 8       res.writeHead(404, {'Content-Type': 'text/html'}); 9       return res.end("404 Not Found"); 10    } 11    res.writeHead(200, {'Content-Type': 'text/html'}); 12    res.write(data); 13    return res.end(); 14  }); 15 }).listen(8000); 16</pre>		





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.



```
nodejs5.js
1 var http = require('http');
2 var upperCase = require('upper-case')
3
4 http.createServer(function (req,res){
5   res.write(upperCase('Uki is the best place to learn programming!'));
6   res.end();
7 }).listen(8080);
8
```

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



```
ukistu18@ukipc18: ~/Documents/Uki4/Programming/nodejs
ukistu18@ukipc18: ~/Documents/Uki4/Pr... x ukistu18@ukipc18: ~/Documents/Uki4/Pr... x
ukistu18@ukipc18:~/Documents/Uki4/Programming/nodejs$ node nodejs6.js
I bark when I see strangers!
ukistu18@ukipc18:~/Documents/Uki4/Programming/nodejs$
```

```
nodejs5.js | nodejs6.js
1
2 var events = require('events');
3 var EventEmitter = new events.EventEmitter();
4
5 var myEventHandler = function () {
6   console.log('I bark when I see strangers!');
7 }
8 emitter.on('bark', myEventHandler);
9 emitter.emit('bark');
10
```

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

```
ukistu18@ukipc18: ~/Doc... x ukistu18@ukipc18: ~/Doc... x ukistu18@ukipc18: ~/Doc... x
ukistu18@ukipc18:~/Documents/Uki4/Programming/nodejs$ npm install formidable
nodejs@1.0.0 /home/ukistu18/Documents/Uki4/Programming/nodejs
└─ formidable@1.2.1

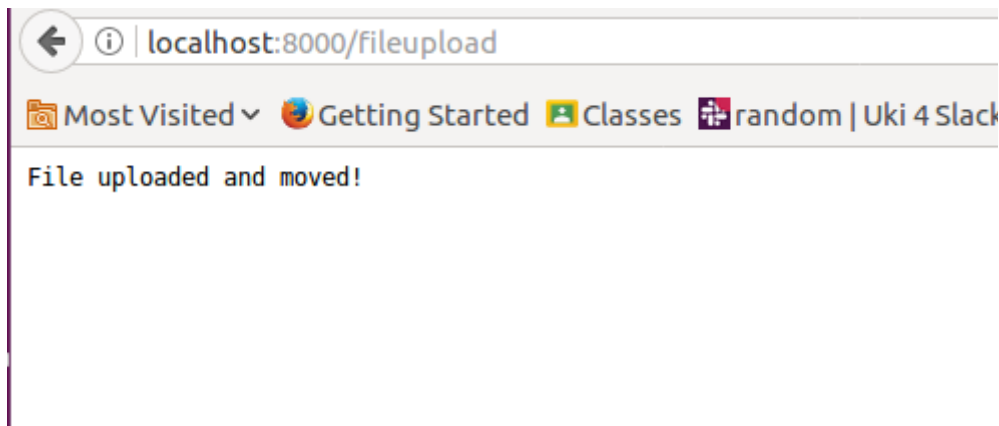
npm WARN nodejs@1.0.0 No description
npm WARN nodejs@1.0.0 No repository field.
ukistu18@ukipc18:~/Documents/Uki4/Programming/nodejs$
```

```

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/ukistul8/Documents/Uki4/Programming/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

```

7.1 Save that uploaded file into your Documents directory.



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 !"

```
1  var nodemailer = require('nodemailer');
2
3  var transporter = nodemailer.createTransport({
4    service: 'gmail',
5    auth: {
6      user: 'arajegan.aj@gmail.com',
7      pass: '*****'
8    }
9  });
10
11 var mailOptions = {
12   from: 'arajegan.aj@gmail.com',
13   to: 'info@uki.life',
14   subject: 'Testing my nodemailer module',
15   text: 'This is easy !'
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
```