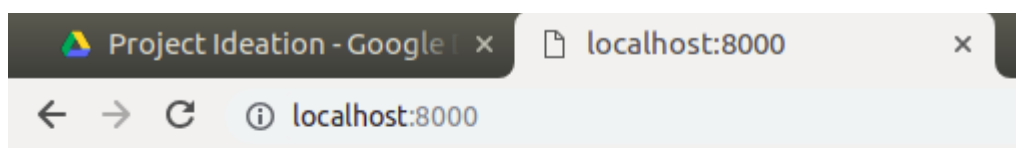


1) Create a custom module which returns the sum and average of any two numbers passed into it. Require the module and run the server by passing 123 and 321 so that the server prints out the sum and average.

```
ques1.js  x  mydoc.js  x
1  var http = require('http');
2  var sums = require('./mydoc')
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
```

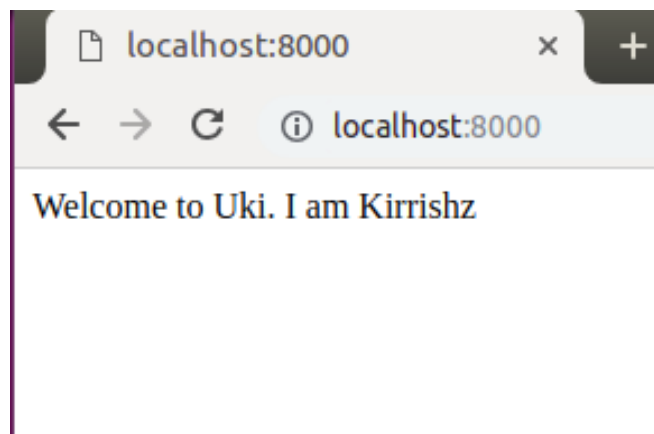
```
ques1.js  x  mydoc.js  x
1  exports.sumAndAverage = function(a,b){
2    var sum = (a+b);
3    var avg = a+b/2
4    return 'The sum is: ' + sum + "& Average is:" + avg
5  }
6
```



Sum of two numbers is :The sum is: 444& Average is:283.5

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)

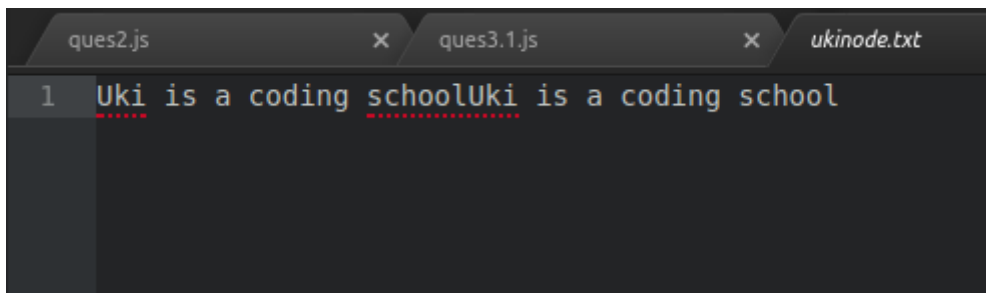
```
ques2.js x
1 var http = require('http');
2 http.createServer(function (req, res) {
3   res.writeHead(200, {'Content-Type': 'text/html'});
4   res.write('Welcome to Uki. I am Kirrishz');
5   res.end();
6 }).listen(8000);
7
```



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

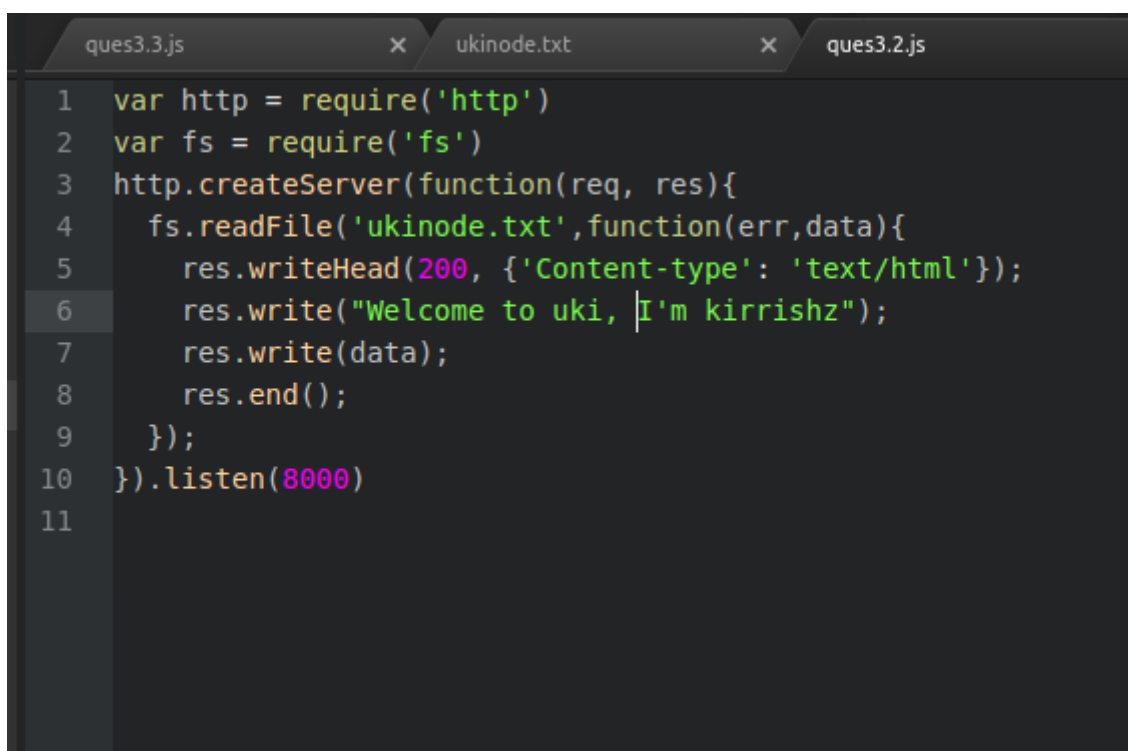
3.1 Write a paragraph about Uki into that file

```
ques2.js x ques3.1.js x ukinode.txt
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
```

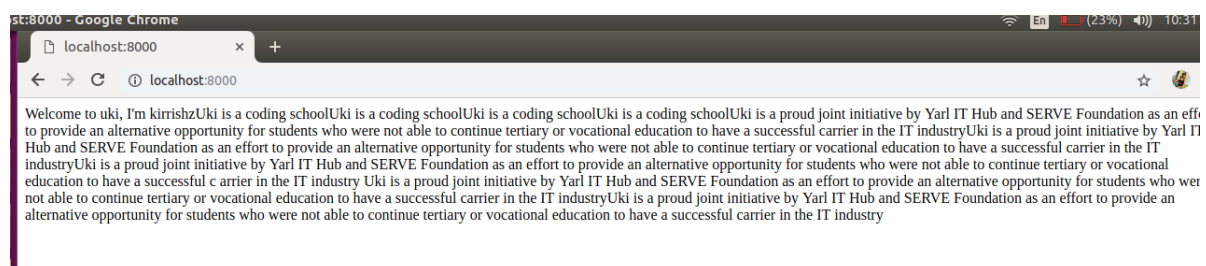


```
ques2.js x ques3.1.js x ukinode.txt
1 Uki is a coding schoolUki is a coding school
```

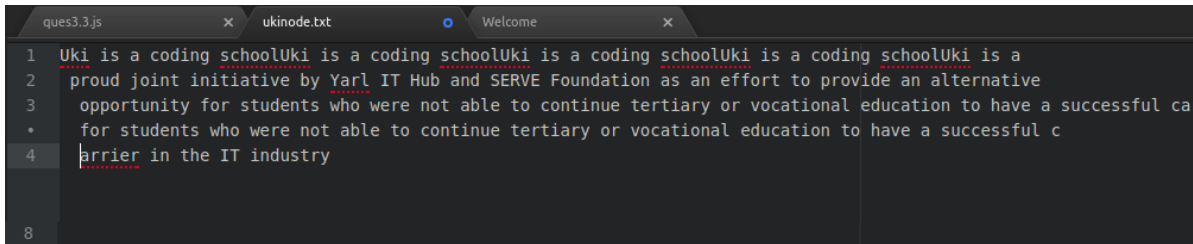
### 3.2 Serve that file to the client (Read File) over your server



```
ques3.3.js x ukinode.txt x ques3.2.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 kirrishz");
7     res.write(data);
8     res.end();
9   });
10 }).listen(8000)
11
```

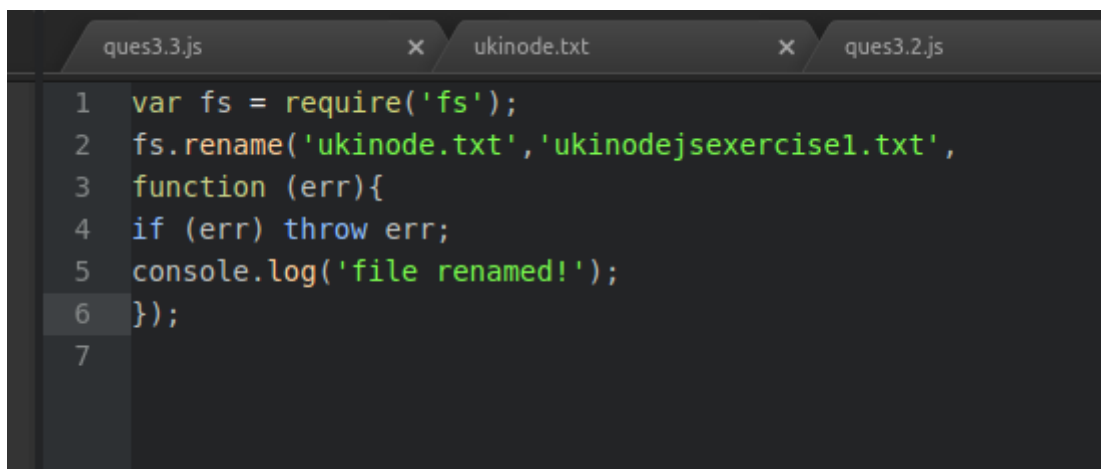


### 3.3 Append another paragraph about Uki and now serve the new file



```
1 Uki is a coding schoolUki is a coding schoolUki is a coding schoolUki is a coding schoolUki is a
2 proud joint initiative by Yarl IT Hub and SERVE Foundation as an effort to provide an alternative
3 opportunity for students who were not able to continue tertiary or vocational education to have a successful ca
4 rrier in the IT industry
8
```

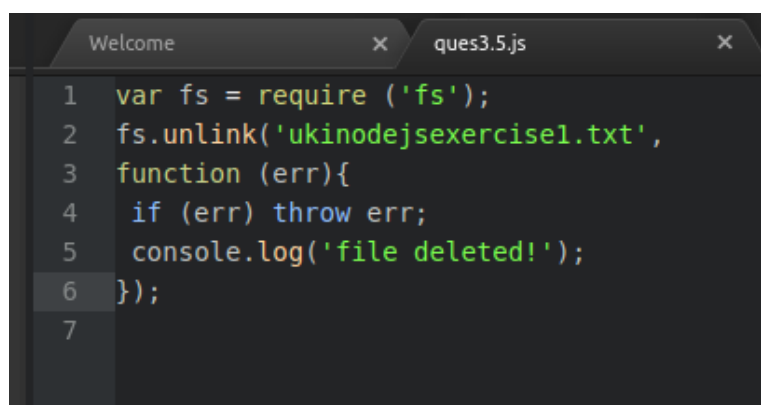
### 3.4 Rename the file as ukinodejsexercise1.txt



```
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
```

```
^Cukistu06@ukipc06:~/Documents/uki4/programming/Nodejs$ nodemon ques3.4.js
[nodemon] 1.18.9
[nodemon] to restart at any time, enter `rs`
[nodemon] watching: *.*
[nodemon] starting `node ques3.4.js`
file renamed!
[nodemon] clean exit - waiting for changes before restart
```

### 3.5 Delete the file you created



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

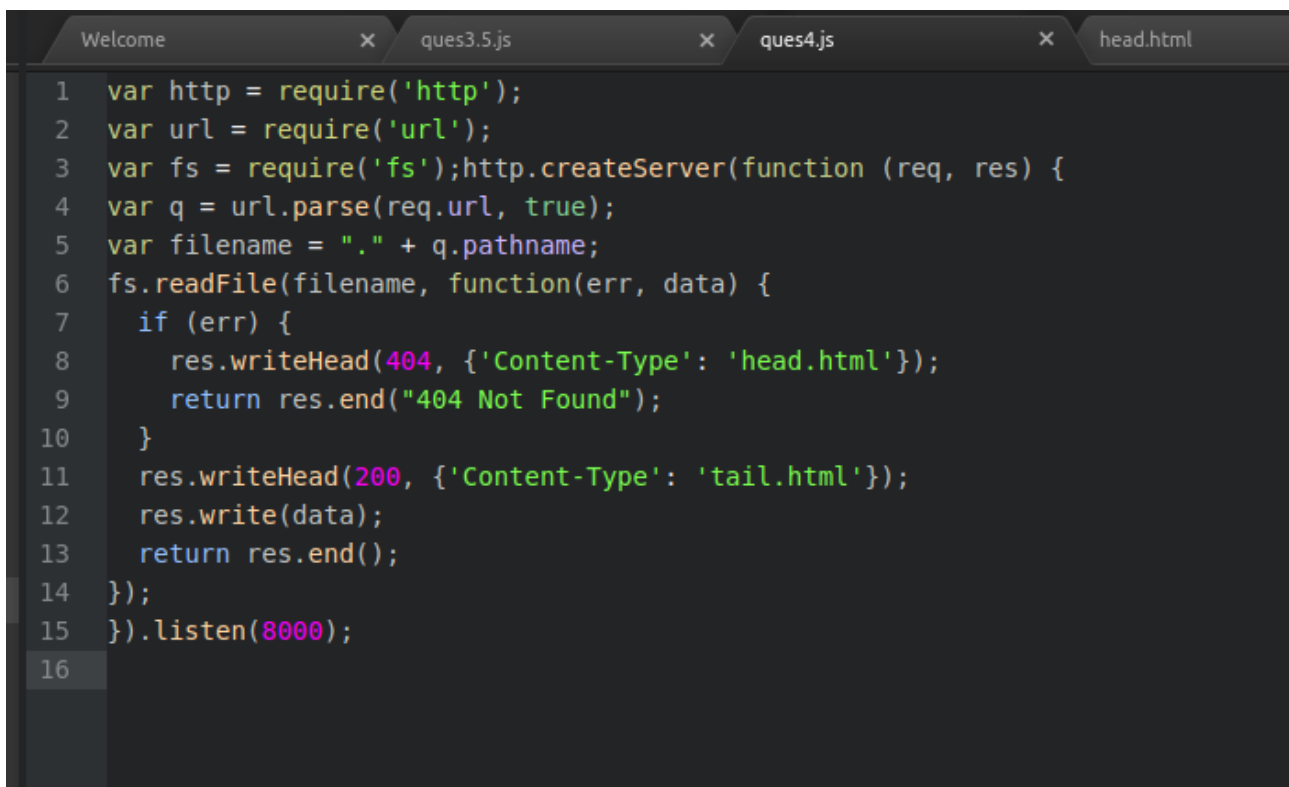
```
ukistu06@ukipc06:~/Documents/uki4/programming/Nodejs$ nodemon ques3.5.js
[nodemon] 1.18.9
[nodemon] to restart at any time, enter `rs`
[nodemon] watching: *.*
[nodemon] starting `node ques3.5.js`
file deleted!
[nodemon] clean exit - waiting for changes before restart
```

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.

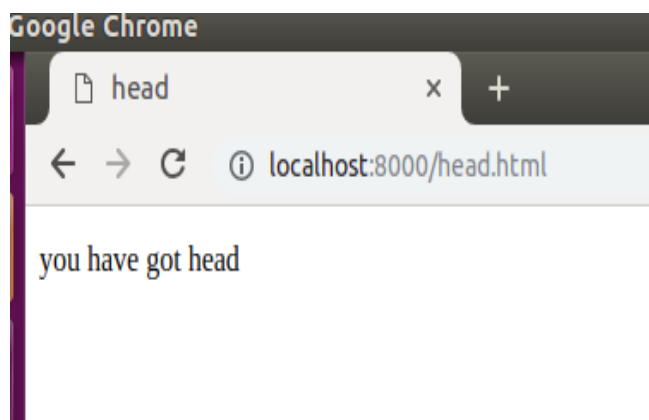
If you have followed the correct steps you should see two different results when opening these two addresses:

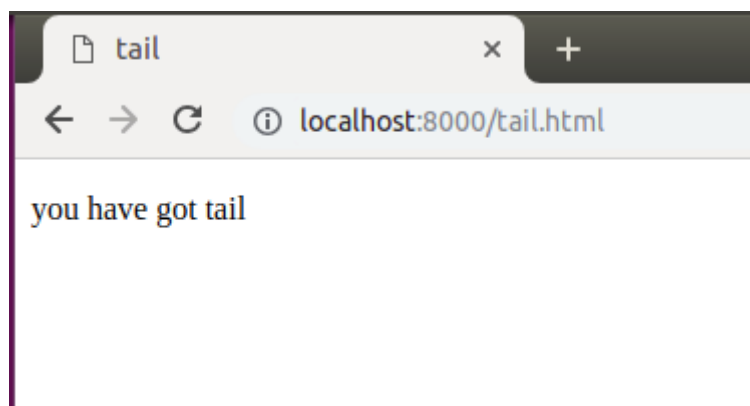
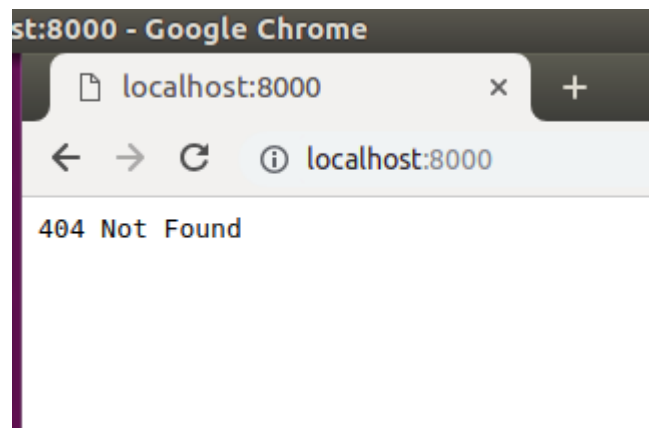
<http://localhost:8080/head.html> -> You have got head

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

A screenshot of a code editor with a dark theme. The editor has four tabs at the top: 'Welcome', 'ques3.5.js', 'ques4.js', and 'head.html'. The 'head.html' tab is active, showing a JavaScript file. The code is as follows:

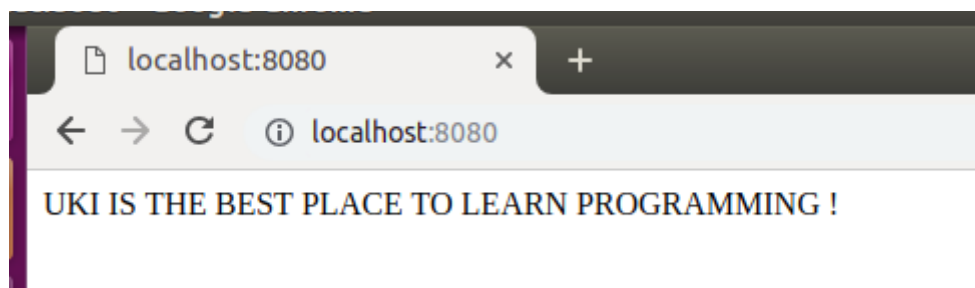
```
1 var http = require('http');
2 var url = require('url');
3 var fs = require('fs'); http.createServer(function (req, res) {
4   var q = url.parse(req.url, true);
5   var filename = "." + q.pathname;
6   fs.readFile(filename, function(err, data) {
7     if (err) {
8       res.writeHead(404, {'Content-Type':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





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.

```
Cukistu06@ukipc06:~/Documents/uki4/programming/Nodejs$ npm install upper-case -g
/home/ukistu06/.npm/versions/node/v6.16.0/lib
└─ upper-case@1.1.3
```



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

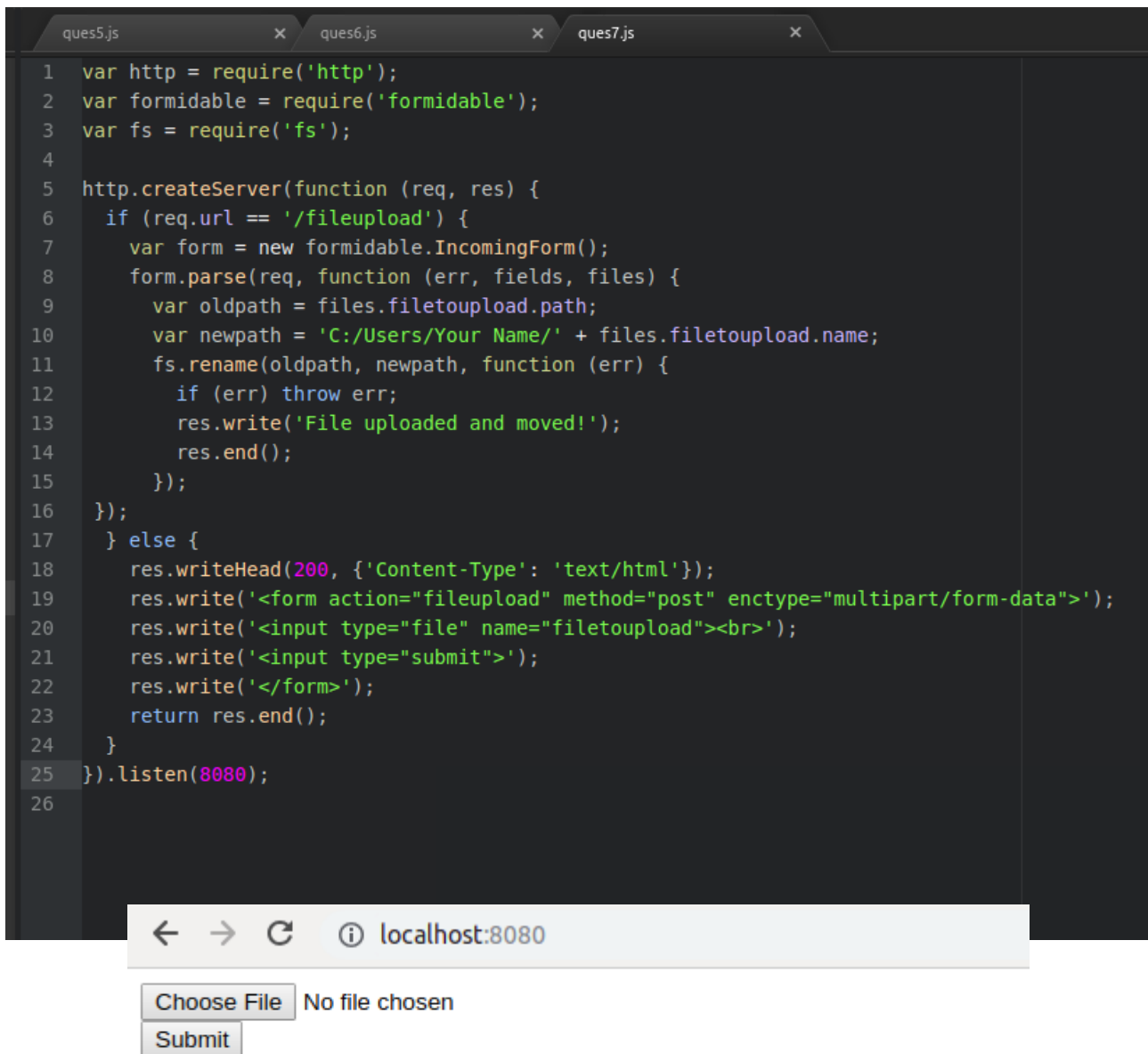
```
ukistu06@ukipc06:~/Documents/uki4/programming/Nodejs$ nodemon ques6.js
[nodemon] 1.18.9
[nodemon] to restart at any time, enter `rs`
[nodemon] watching: *.*
[nodemon] starting `node ques6.js`
I bark when I see strangers !
[nodemon] clean exit - waiting for changes before restart
```

```
ques5.js  x  ques6.js  x  ques7.js  x  ques8.js
1  var events = require('events');
2  var eventEmitter = new events.EventEmitter();//Create an event handler:
3  var myEventHandler = function () {
4    console.log('I bark when I see strangers !');
5  }//Assign the eventhandler to an event:
6  eventEmitter.on('bark', myEventHandler);//Fire the 'scream' event:
7  eventEmitter.emit('bark');
8
```

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.

```
^Cukistu06@ukipc06:~/Documents/uki4/programming/Nodejs$ npm install formidable -g
/home/ukistu06/.npm/versions/node/v6.16.0/lib
└─ formidable@1.2.1
```



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 !”

8.1 Now instead of text send a basic html formatted mail.



```
ques5.js      ques6.js      ques7.js
1  var nodemailer = require('nodemailer');
2
3  var transporter = nodemailer.createTransport({
4    service: 'gmail',
5    auth: {
6      user: 's.kirishanth97@gmail.com',
7      pass: 'gigugigu0001'
8    }
9  });
10
11 var mailOptions = {
12   from: 's.kirishanth97@gmail.com',
13   to: 'info@uki.life',
14   subject: 'Sending Email using Node.js',
15   text: 'That was 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
```