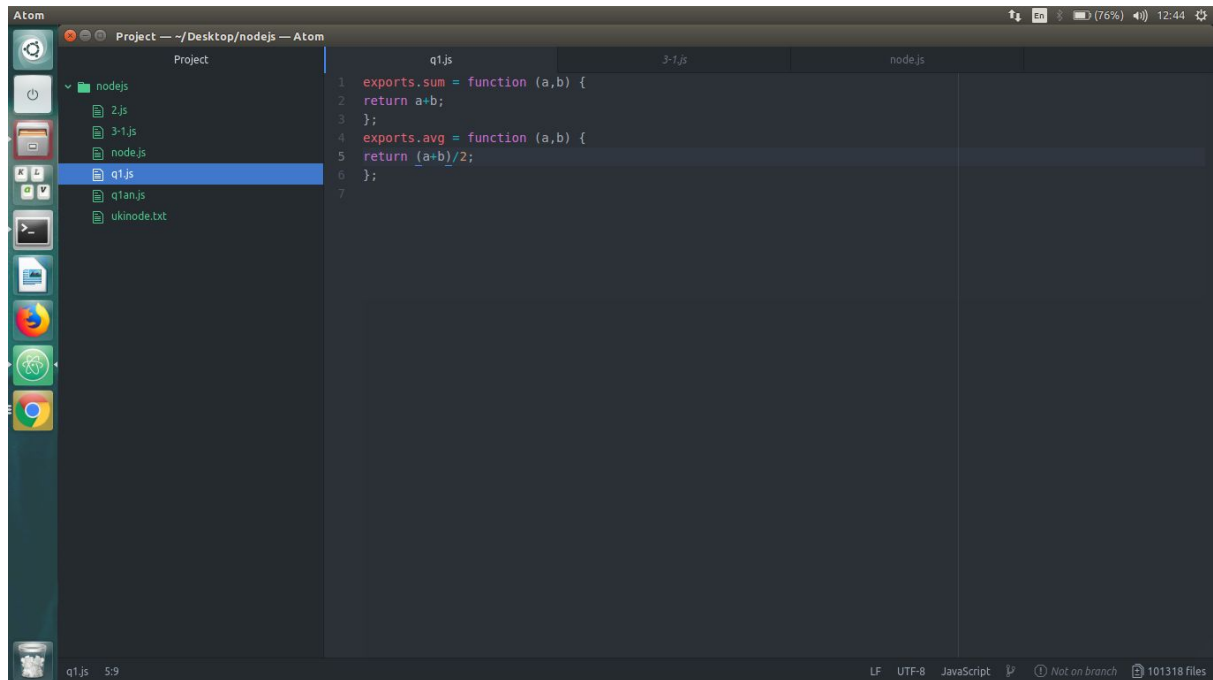


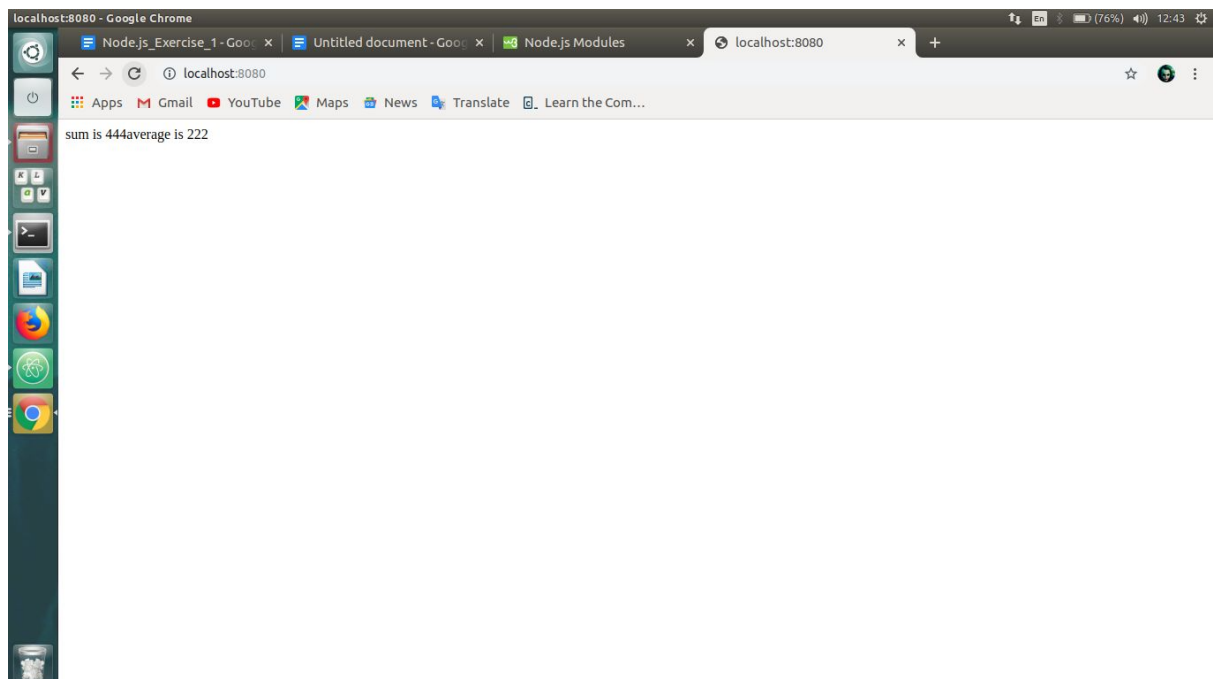
# Node.js Exercise 1

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.

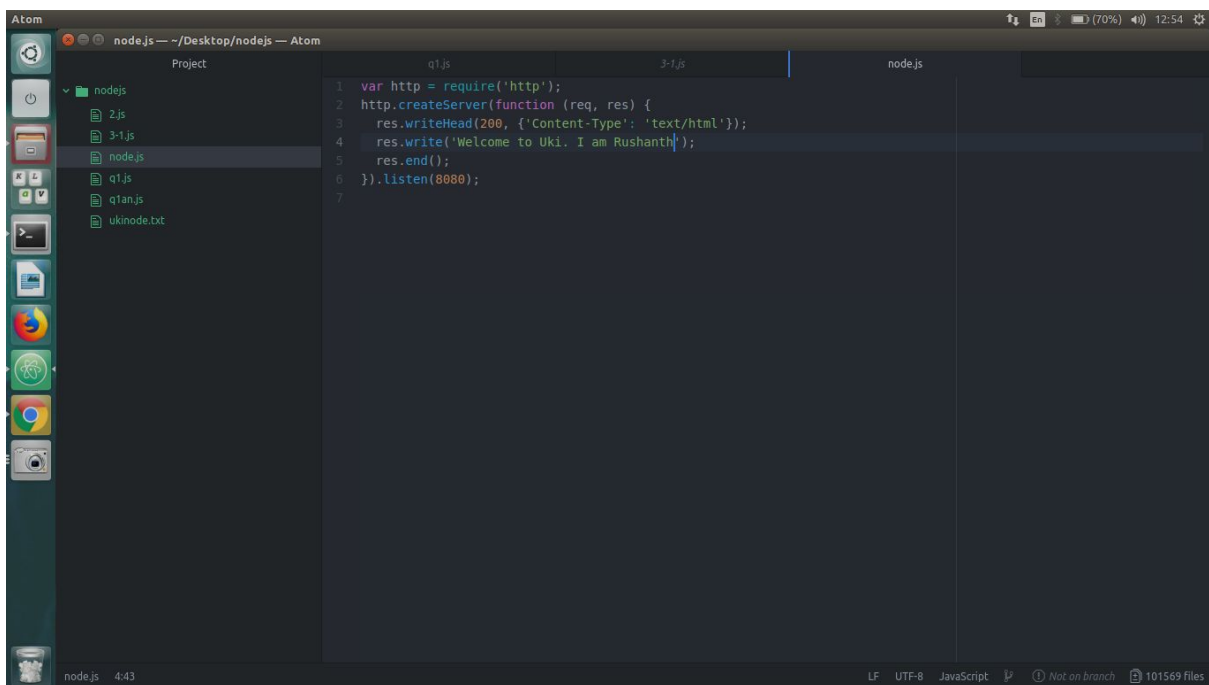
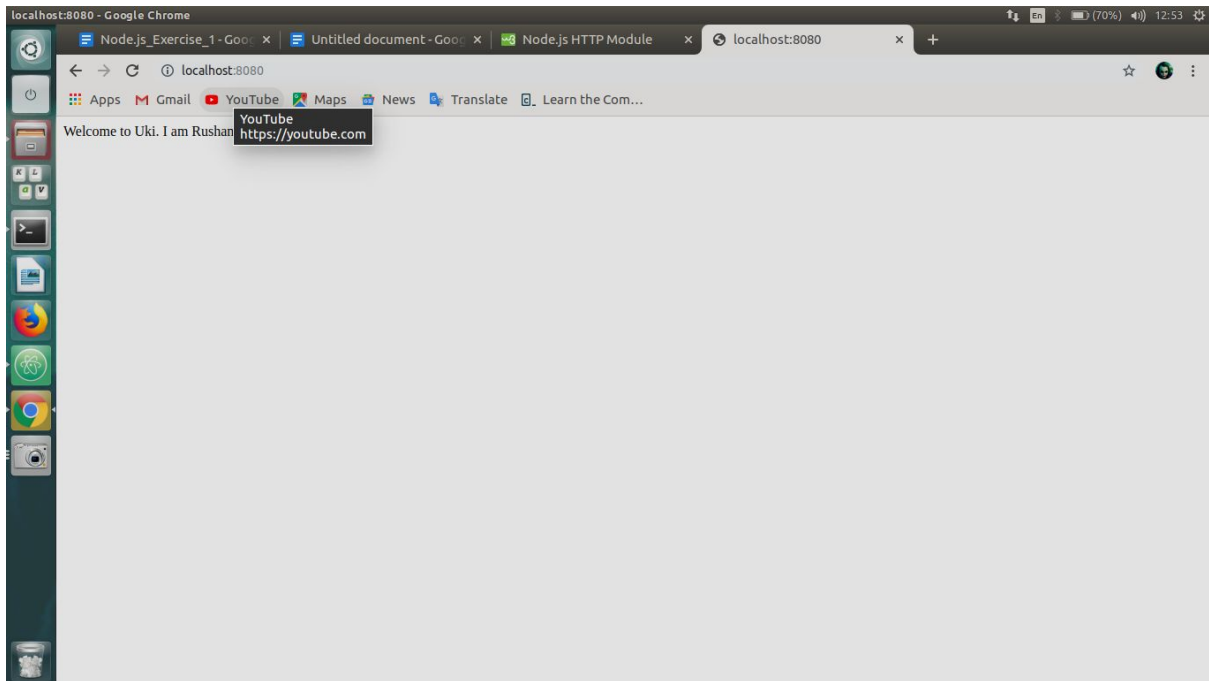


The screenshot shows the Atom code editor with a project open at `~/Desktop/nodejs`. The file `q1.js` is selected in the left sidebar and is open in the main editor. The code in `q1.js` is as follows:

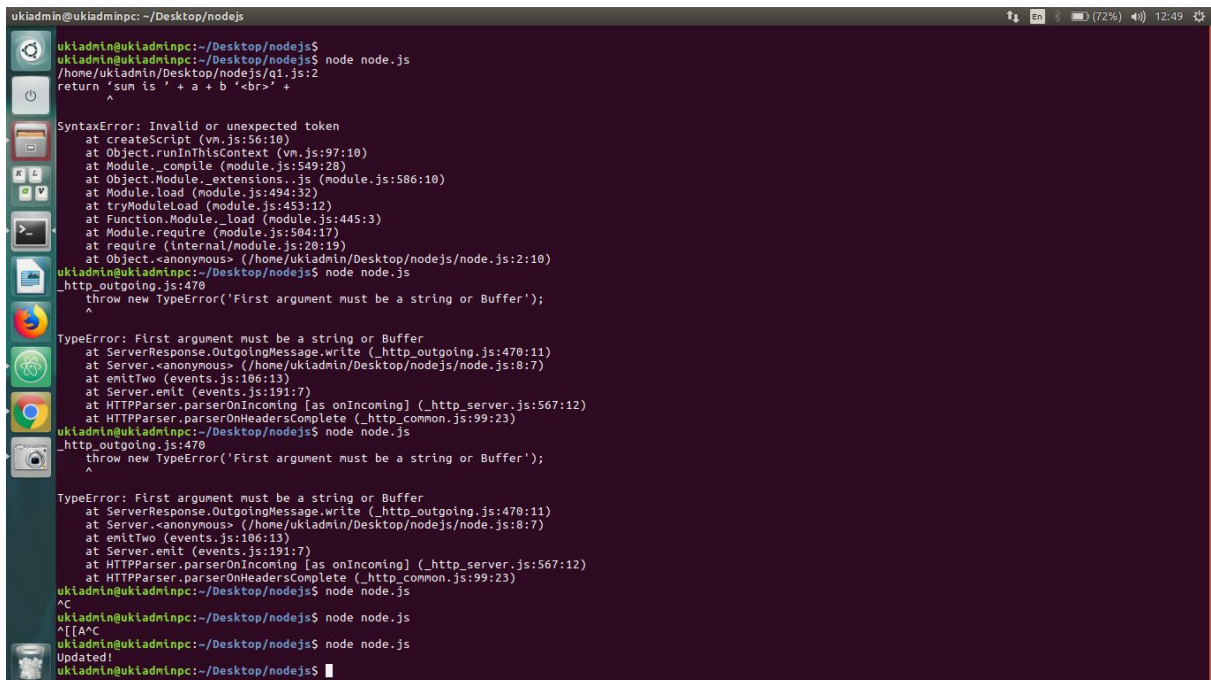
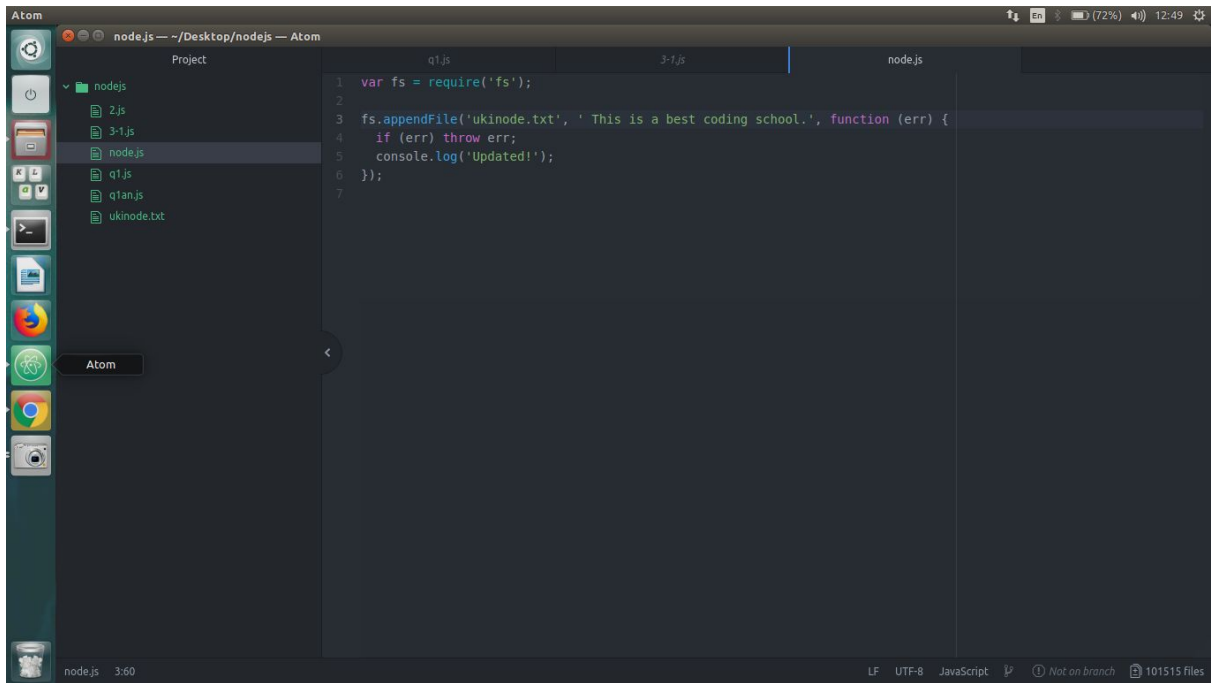
```
1 exports.sum = function (a,b) {  
2   return a+b;  
3 };  
4 exports.avg = function (a,b) {  
5   return (a+b)/2;  
6 };  
7
```



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)

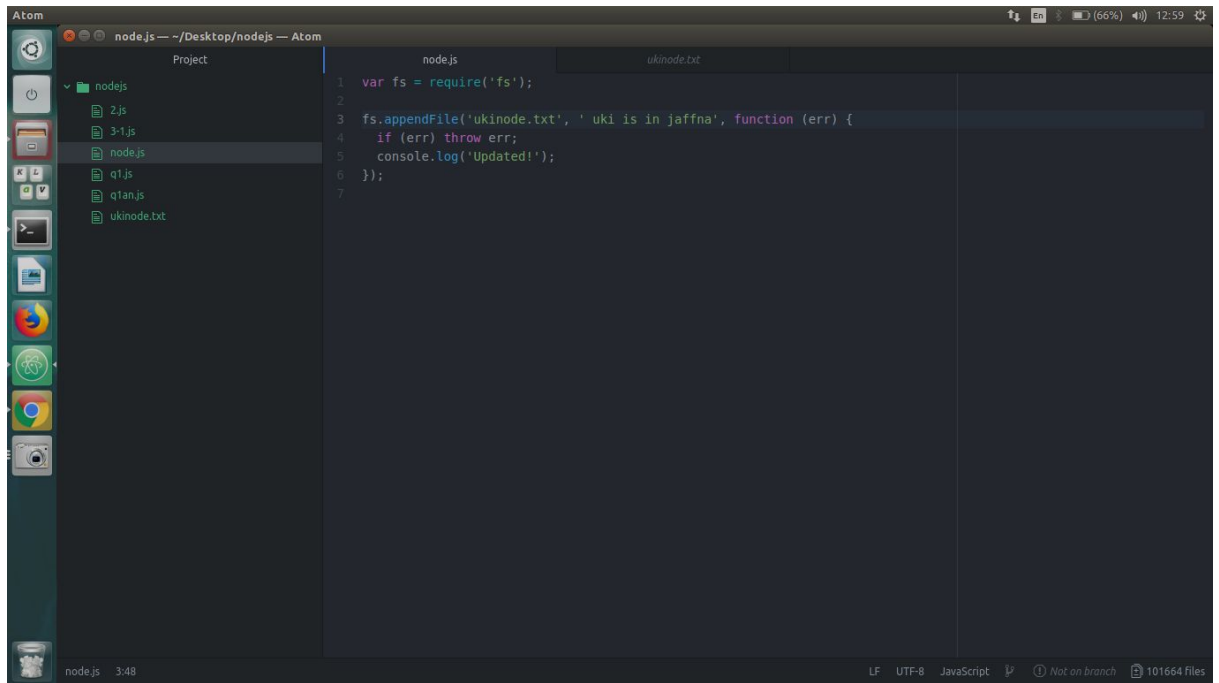


3. Using the file system module create a new file called ukinode.txt
  - 3.1 Write a paragraph about Uki into that file

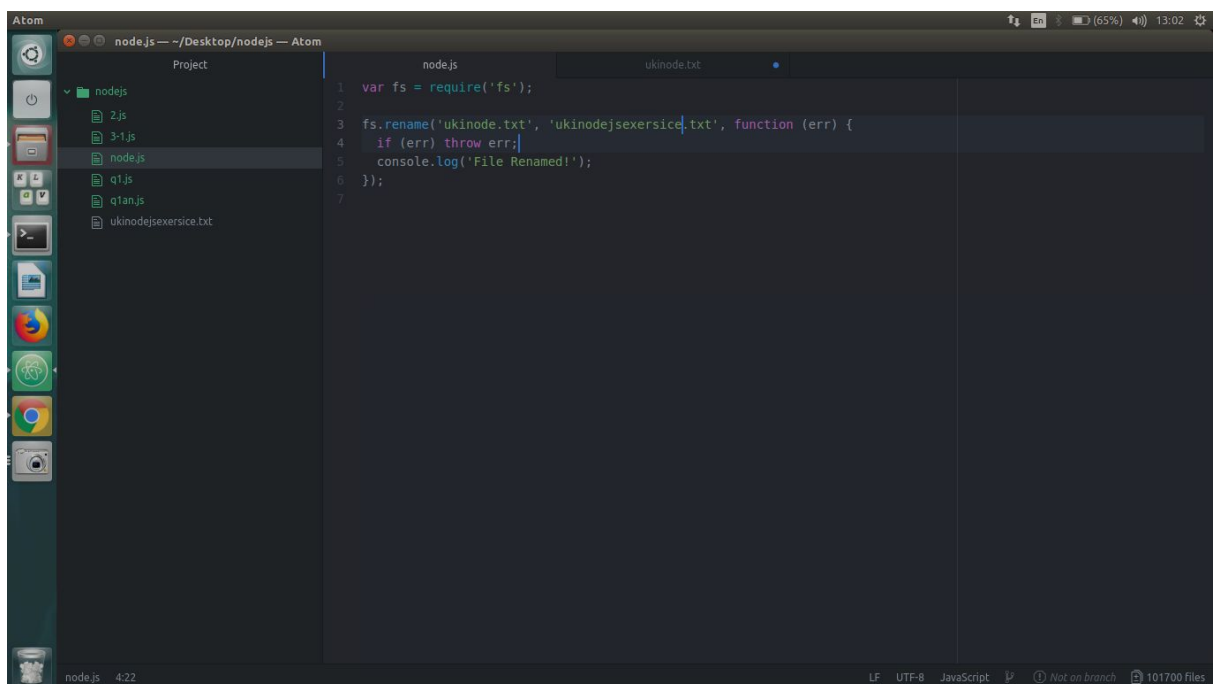


3.2 Serve that file to the client (Read File) over your server

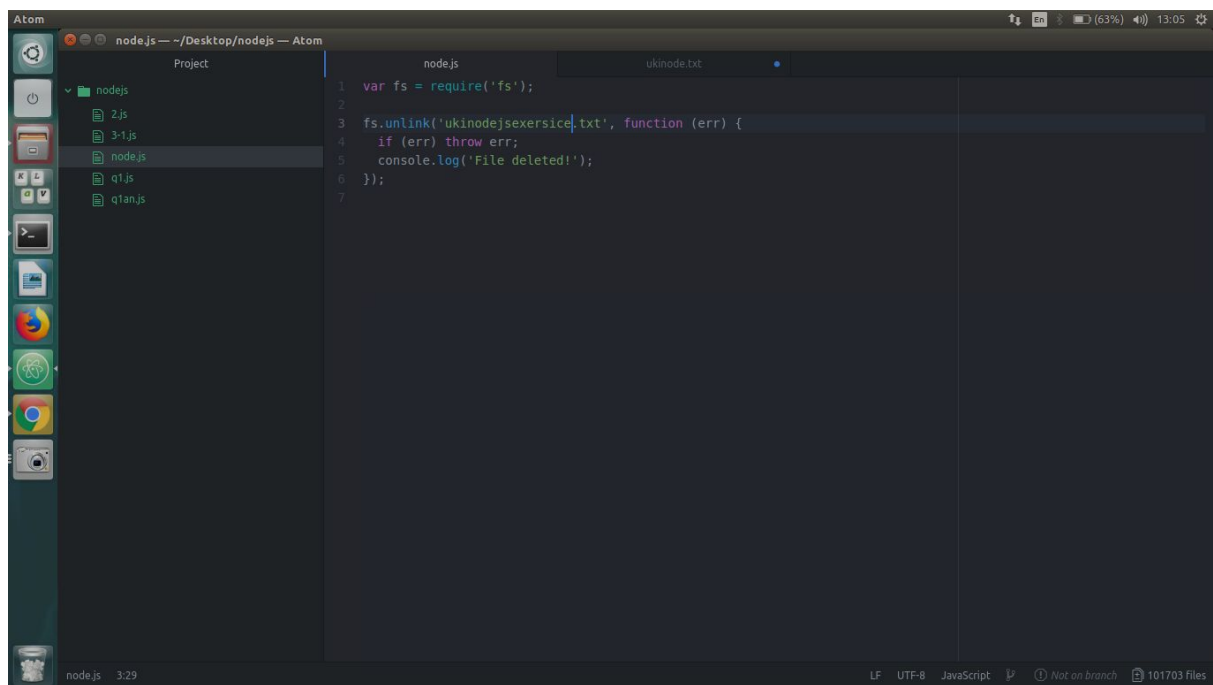
3.3 Append another paragraph about Uki and now serve the new file



### 3.4 Rename the file as ukinodejsexercise1.txt



### 3.5 Delete the file you created

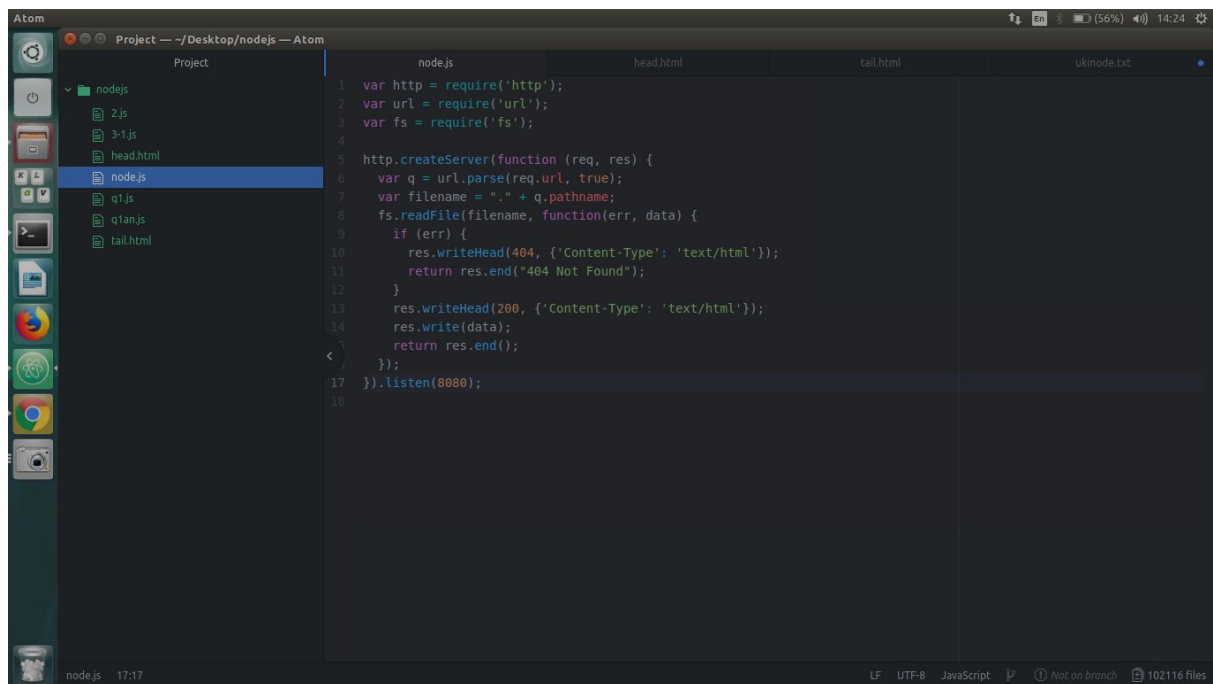
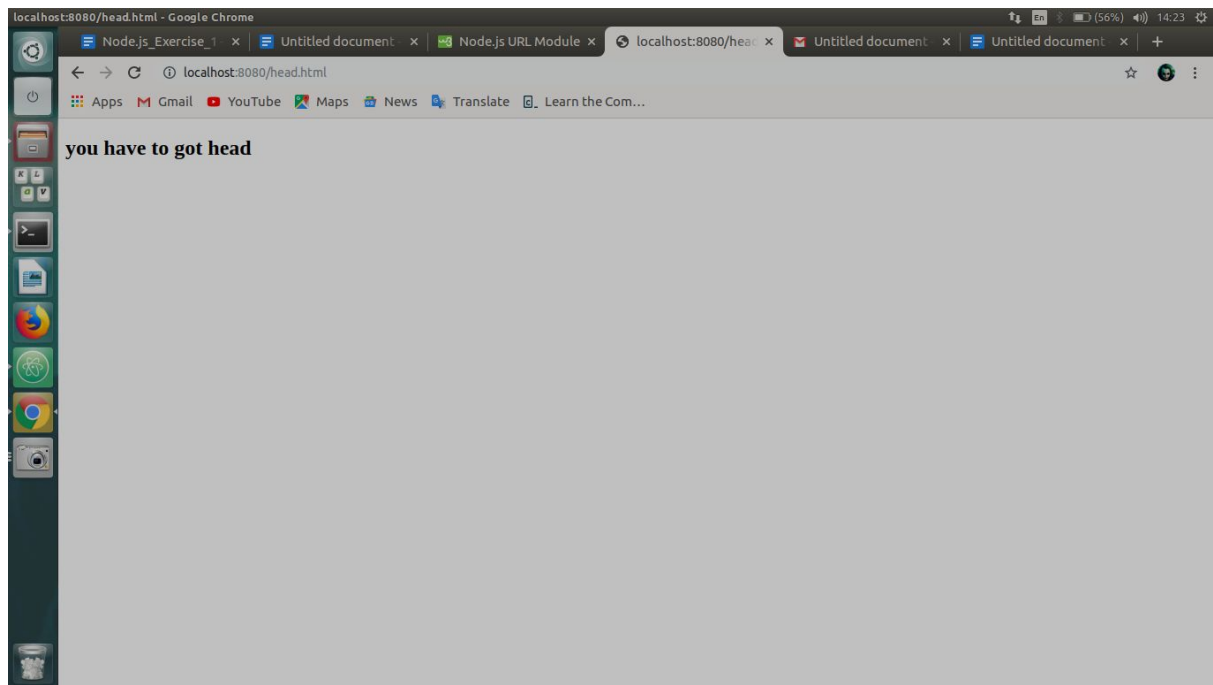


4. Create two html files called head.html which is a web page which says 'you have got head' and tail.html which is a web page which says 'you have got tail' and save them in the same folder as your node.js files. Create a Node.js file that opens the requested file and returns the content to the client.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

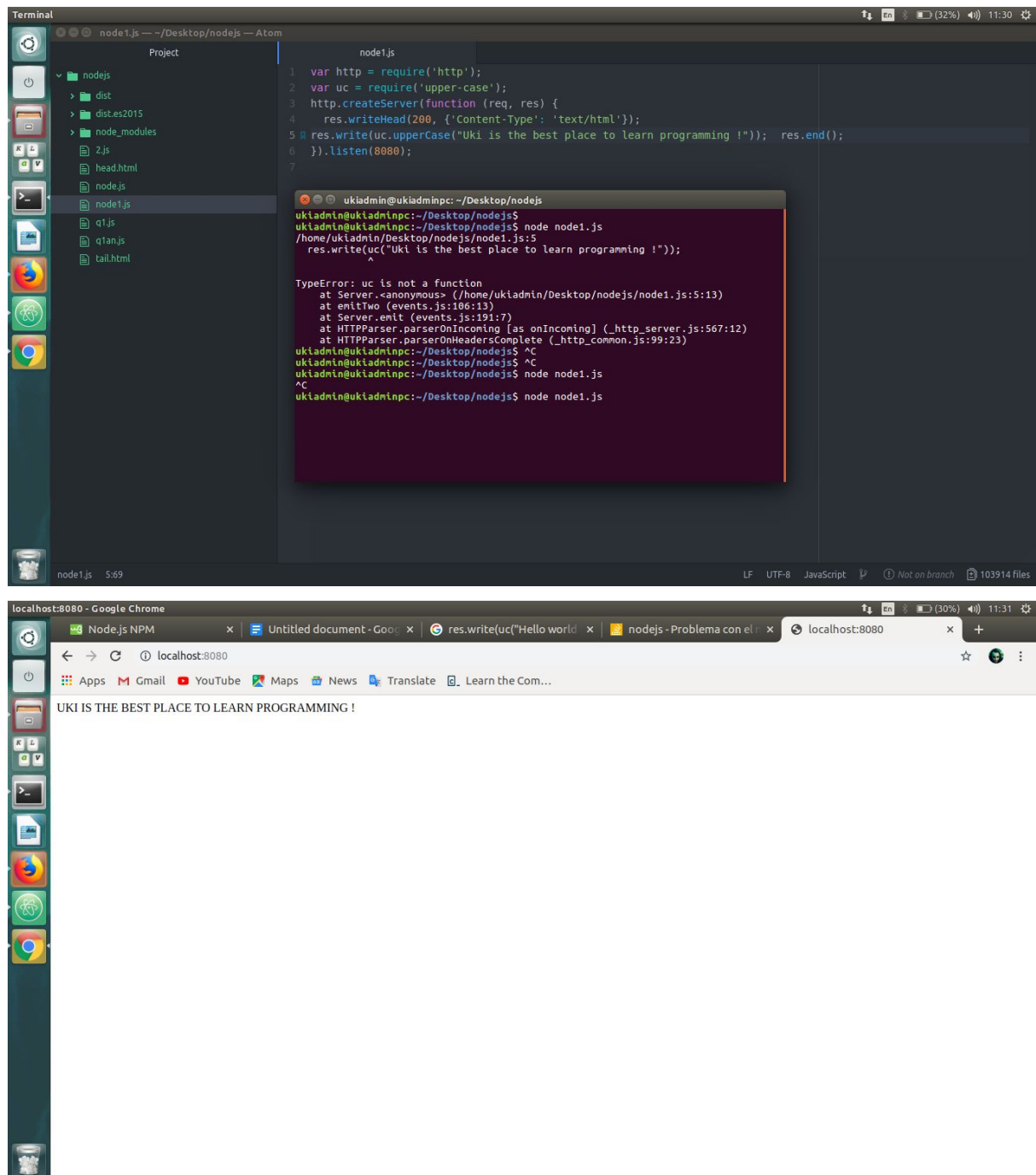
If you have followed the correct steps you should see two different results when opening these two addresses:

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

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



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.



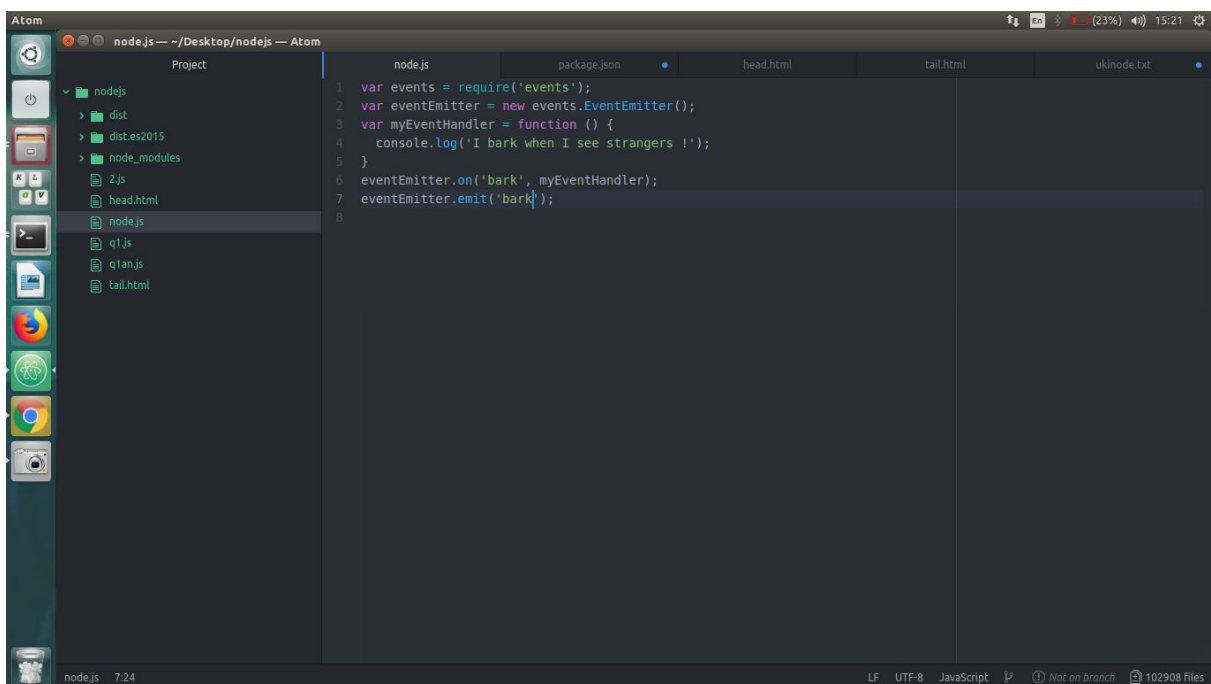
6. Create an event handler function that will say "I bark when I see strangers !" when a "bark" event is fired.

```
ukiadmin@ukiadminpc: ~/Desktop/nodejs
ukiadmin@ukiadminpc:~/Desktop/nodejs$ npm install upper-case
/home/ukiadmin/Desktop/nodejs
└─ upper-case@2.0.1

npm WARN enoent ENOENT: no such file or directory, open '/home/ukiadmin/Desktop/nodejs/package.json'
npm WARN nodejs No description
npm WARN nodejs No repository field.
npm WARN nodejs No README data
npm WARN nodejs No license field.
ukiadmin@ukiadminpc:~/Desktop/nodejs$ npm install upper-case
/home/ukiadmin/Desktop/nodejs
└─ upper-case@2.0.1

npm WARN enoent ENOENT: no such file or directory, open '/home/ukiadmin/Desktop/nodejs/package.json'
npm WARN nodejs No description
npm WARN nodejs No repository field.
npm WARN nodejs No README data
npm WARN nodejs No license field.
ukiadmin@ukiadminpc:~/Desktop/nodejs$ sudo npm install upper-case
[sudo] password for ukiadmin:
/home/ukiadmin/Desktop/nodejs
└─ upper-case@2.0.1

npm WARN enoent ENOENT: no such file or directory, open '/home/ukiadmin/Desktop/nodejs/package.json'
npm WARN nodejs No description
npm WARN nodejs No repository field.
npm WARN nodejs No README data
npm WARN nodejs No license field.
ukiadmin@ukiadminpc:~/Desktop/nodejs$ npm --version
3.10.10
ukiadmin@ukiadminpc:~/Desktop/nodejs$ node node.js
I hear a scream!
ukiadmin@ukiadminpc:~/Desktop/nodejs$ node node.js
I bark when I see strangers !
ukiadmin@ukiadminpc:~/Desktop/nodejs$ cls
No command 'cls' found, but there are 18 similar ones
cls: command not found
ukiadmin@ukiadminpc:~/Desktop/nodejs$ clean
No command 'clean' found, did you mean:
Command 'uclean' from package 'svn-buildpackage' (universe)
Command 'pclean' from package 'pbuilder-scripts' (universe)
Command 'clear' from package 'ncurses-bin' (main)
clean: command not found
ukiadmin@ukiadminpc:~/Desktop/nodejs$ node node.js
I bark when I see strangers !
ukiadmin@ukiadminpc:~/Desktop/nodejs$
```



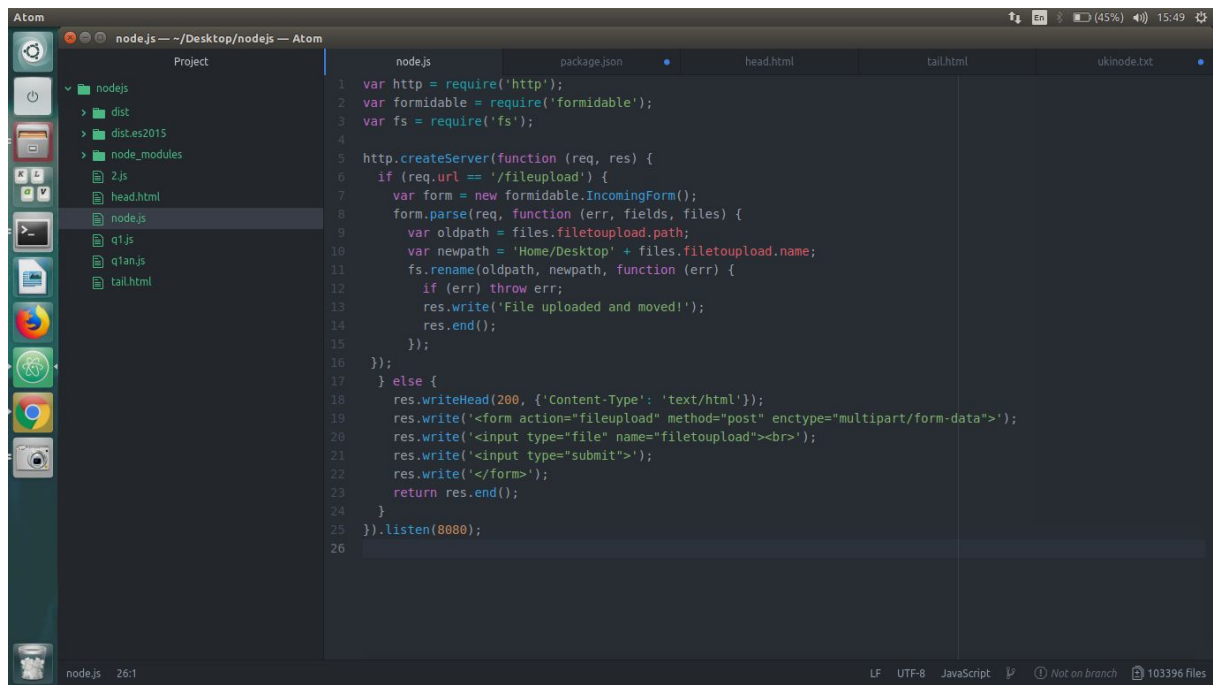
The screenshot shows the Atom code editor interface. On the left, the 'Project' sidebar displays a file tree for the 'nodejs' directory, including subfolders like 'dist', 'dist-es2015', and 'node\_modules', as well as files like '2.js', 'head.html', 'node.js', 'q1.js', 'q1an.js', and 'tail.html'. The main editor area is open to the 'node.js' file, which contains the following JavaScript code:

```
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');
8
```

The status bar at the bottom indicates the file is 'node.js', 7:24, in UTF-8 encoding, using the JavaScript language, and is not on a branch with 102908 files.

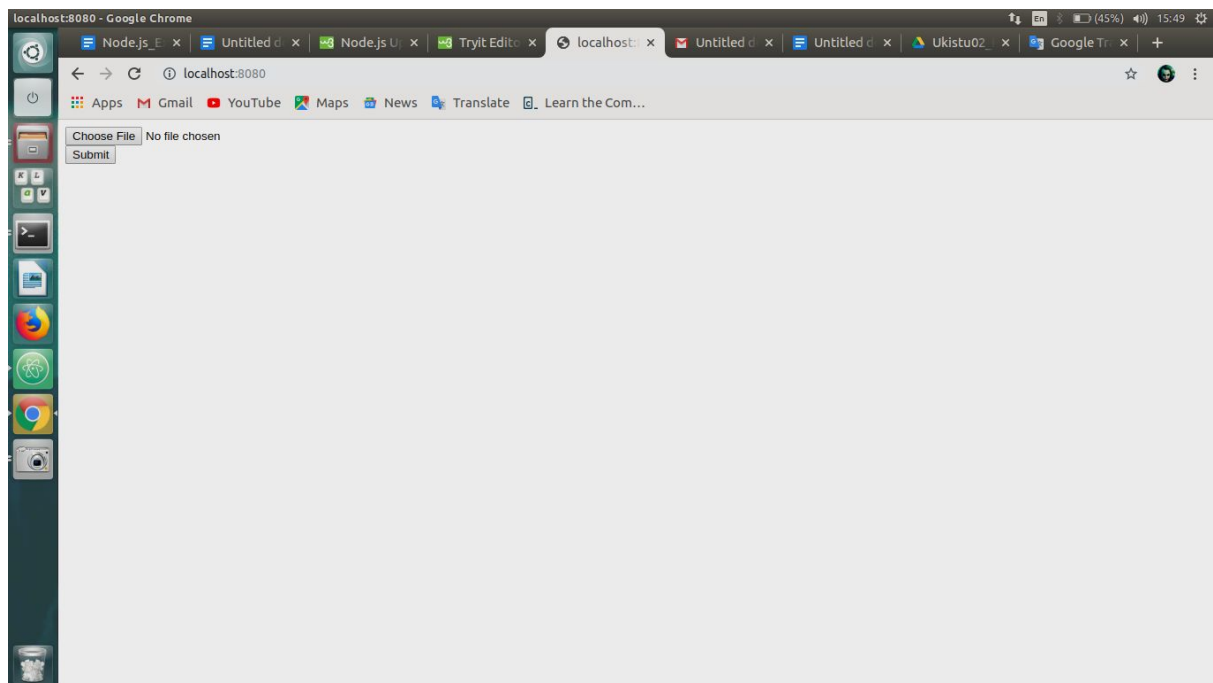
7. Install “formidable” module using npm and make a web page in Node.js that lets the user upload files to your computer.



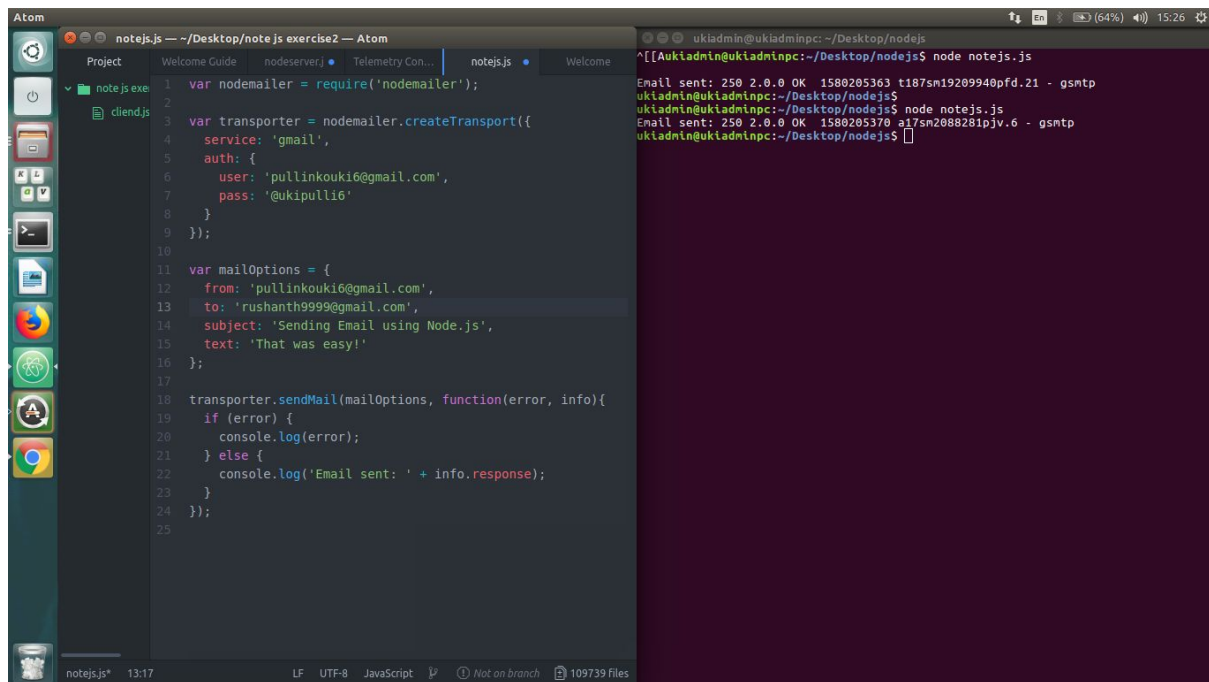


```
1 var http = require('http');
2 var formidable = require('formidable');
3 var fs = require('fs');
4
5 http.createServer(function (req, res) {
6   if (req.url == '/fileupload') {
7     var form = new formidable.IncomingForm();
8     form.parse(req, function (err, fields, files) {
9       var oldpath = files.fileupload.path;
10      var newpath = 'Home/Desktop' + files.fileupload.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="fileupload"><br>');
21     res.write('<input type="submit">');
22     res.write('</form>');
23     return res.end();
24   }
25 }).listen(8080);
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 !”

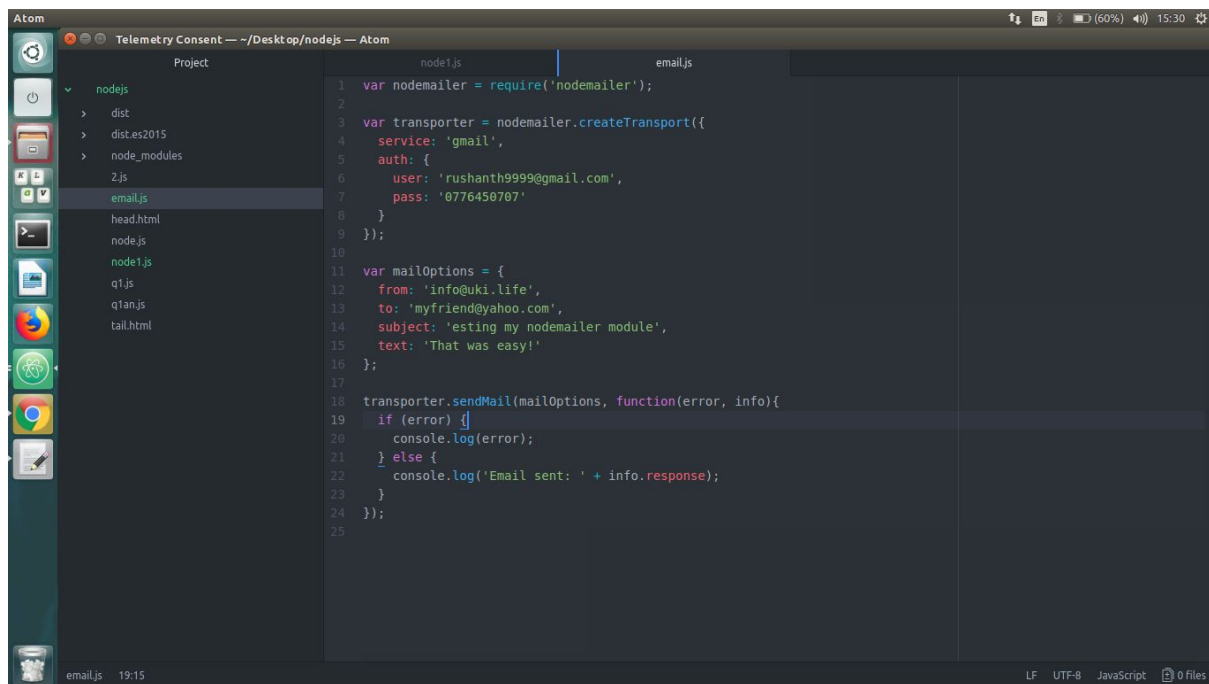


The screenshot shows the Atom editor with a file named `notejs.js` open. The code uses the `nodemailer` module to create a transporter for Gmail and send an email. The email options include a from address, to address, subject, and text. The terminal output shows the email being sent successfully.

```
1 var nodemailer = require('nodemailer');
2
3 var transporter = nodemailer.createTransport({
4   service: 'gmail',
5   auth: {
6     user: 'pullinkouki@gmail.com',
7     pass: '@ukipulli6'
8   }
9 });
10
11 var mailOptions = {
12   from: 'pullinkouki@gmail.com',
13   to: 'rushanth9999@gmail.com',
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
```

Terminal output:

```
^[[Aukladmin@ukladminpc:~/Desktop/nodejs$ node notejs.js
Email sent: 250 2.0.0 OK 1580285363 t187sn19209940pfd.21 - gsmt
ukladmin@ukladminpc:~/Desktop/nodejs$
ukladmin@ukladminpc:~/Desktop/nodejs$ node notejs.js
Email sent: 250 2.0.0 OK 1580285370 a17sm2088281pjbv.6 - gsmt
ukladmin@ukladminpc:~/Desktop/nodejs$
```



The screenshot shows the Atom editor with a file named `email.js` open. The code uses the `nodemailer` module to create a transporter for Gmail and send an email. The email options include a from address, to address, subject, and text. The terminal output shows the email being sent successfully.

```
1 var nodemailer = require('nodemailer');
2
3 var transporter = nodemailer.createTransport({
4   service: 'gmail',
5   auth: {
6     user: 'rushanth9999@gmail.com',
7     pass: '0776450707'
8   }
9 });
10
11 var mailOptions = {
12   from: 'info@uki.life',
13   to: 'myfriend@yahoo.com',
14   subject: 'esting my nodemailer module',
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
```

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

