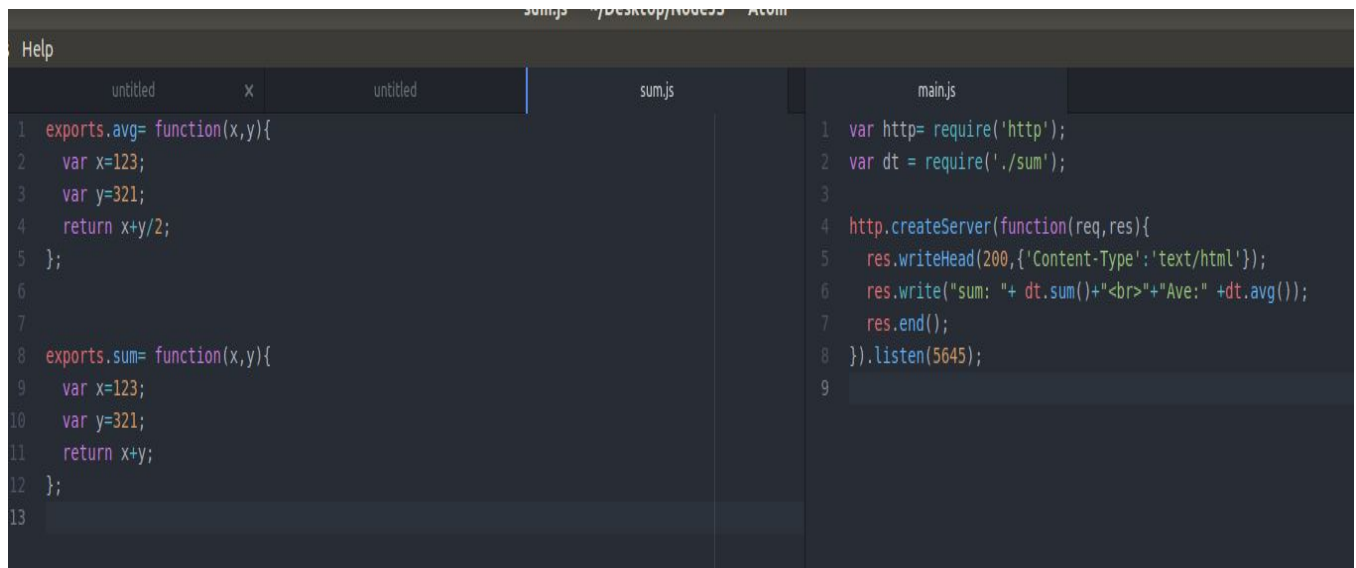1. Create a custom module which returns the sum and average of any two numbers passed into it. Require the module and run the server by passing 123 and 321 so that the server prints out the sum and average.
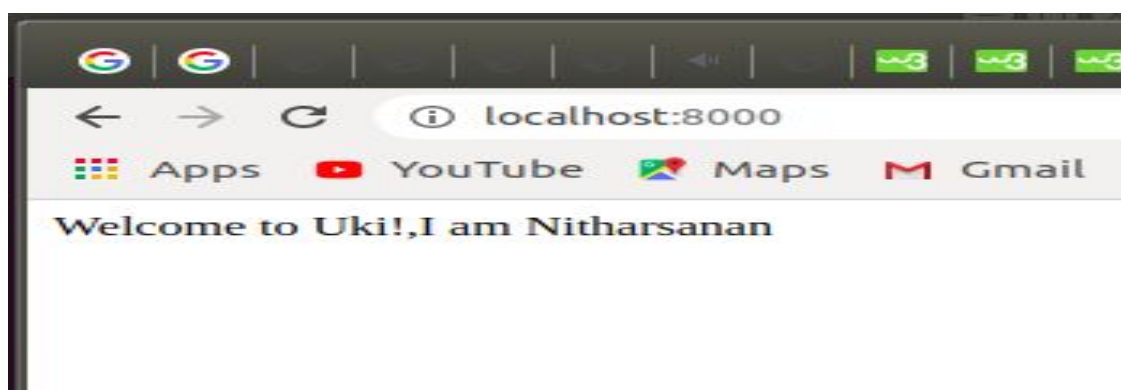
| untitled | X | untitled | sum.js | main.js |

```
1  exports.avg= function(x,y){
2    var x=123;
3    var y=321;
4    return x+y/2;
5  };
6
7
8  exports.sum= function(x,y){
9    var x=123;
10   var y=321;
11   return x+y;
12 };
13
```
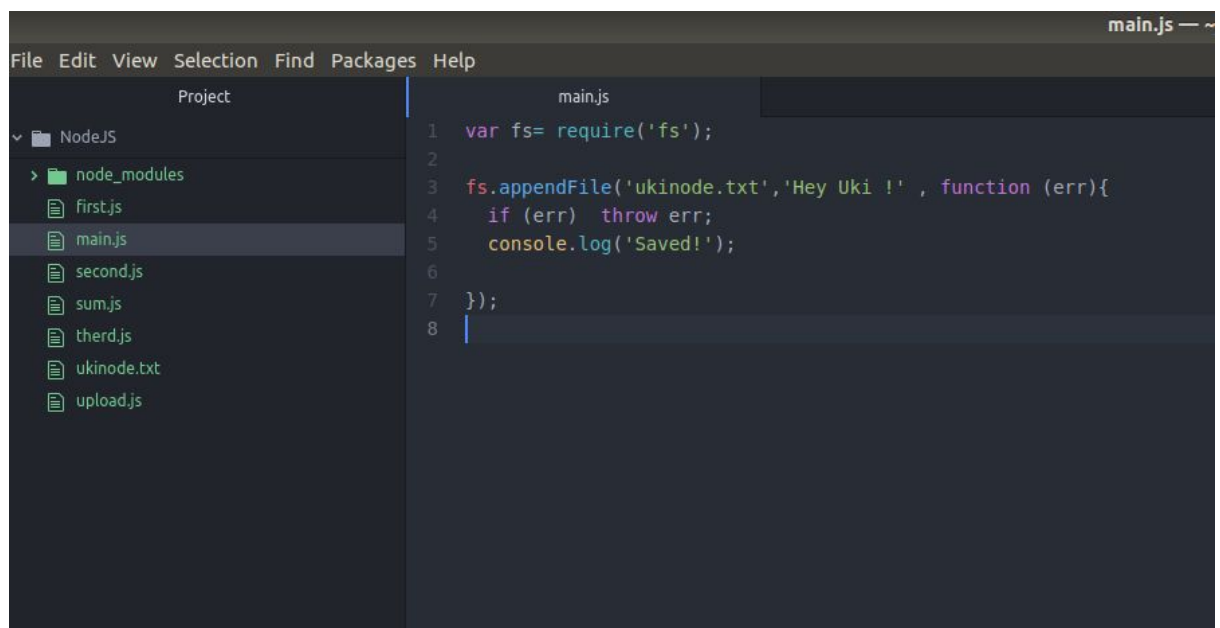
```
1  var http= require('http');
2  var dt = require('./sum');
3
4  http.createServer(function(req,res){
5    res.writeHead(200,{'Content-Type':'text/html'});
6    res.write("sum: "+ dt.sum()+"<br>"+"Ave:" +dt.avg());
7    res.end();
8  }).listen(5645);
9
```

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)

```
              main.js
1  var http= require('http');
2
3
4  http.createServer(function(req,res){
5    res.writeHead(200,{'Content-Type':'text/html'});
6    res.write('Welcome to Uki!,I am Nitharsanan');
7    res.end();
8  }).listen(8000);
9  |
```

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

```
File  Edit  View  Selection  Find  Packages  Help
         Project                          main.js
v ■ NodeJS                      1   var fs= require('fs');
                                2
  > ■ node_modules              3   fs.appendFile('ukinode.txt','Hey Uki !' , function (err){
    ⬚ first.js                  4     if (err)  throw err;
    ⬚ main.js                   5     console.log('Saved!');
    ⬚ second.js                 6
    ⬚ sum.js                    7   });
    ⬚ therd.js                  8   |
    ⬚ ukinode.txt
    ⬚ upload.js
```

```
nithar@nithar-Inspiron-5570:~/Desktop/NodeJS$ node main.js
Saved!
nithar@nithar-Inspiron-5570:~/Desktop/NodeJS$ node main.js
Updated
nithar@nithar-Inspiron-5570:~/Desktop/NodeJS$
```

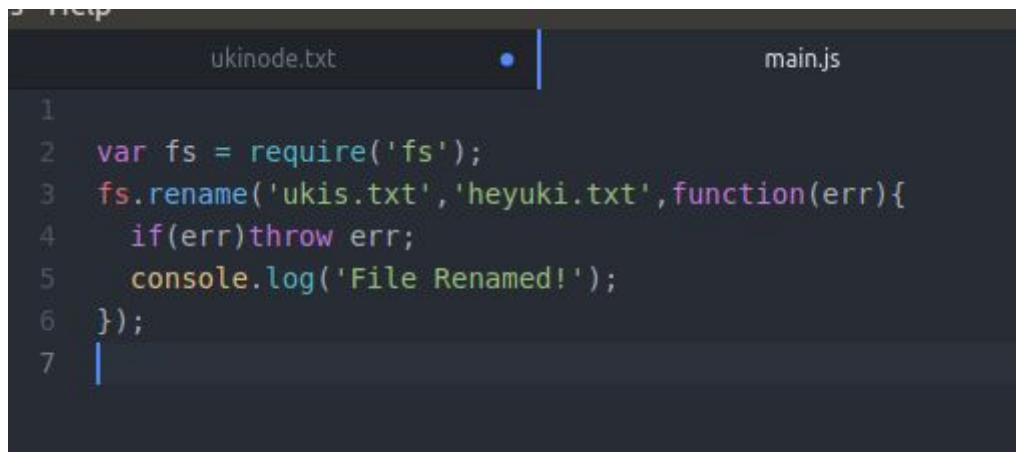3.2 Serve that file to the client (Read File) over your server

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

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

fs.appendFile('ukinode.txt','Hey Uki Im Nitharsanan' , function (err){
  if (err)  throw err;
  console.log('Updated');

});
```
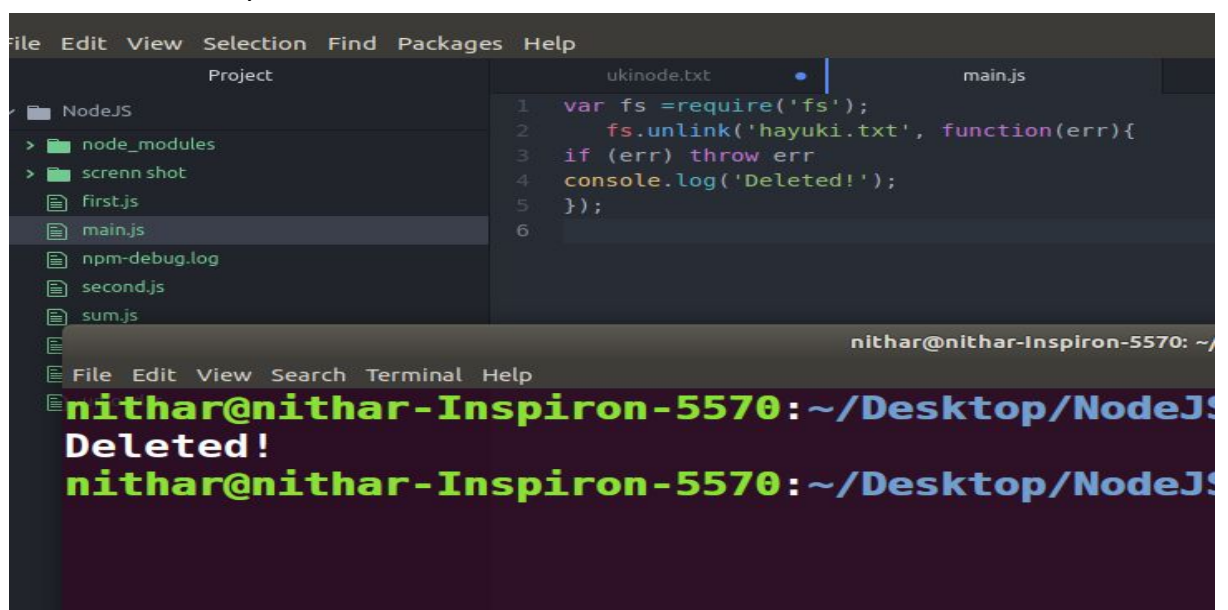
3.4 Rename the file as ukinodejsexercise1.txt

```
var fs = require('fs');
fs.rename('ukis.txt','heyuki.txt',function(err){
  if(err)throw err;
  console.log('File Renamed!');
});
```

3.5 Delete the file you created

```
var fs =require('fs');
  fs.unlink('hayuki.txt', function(err){
if (err) throw err
console.log('Deleted!');
});
```

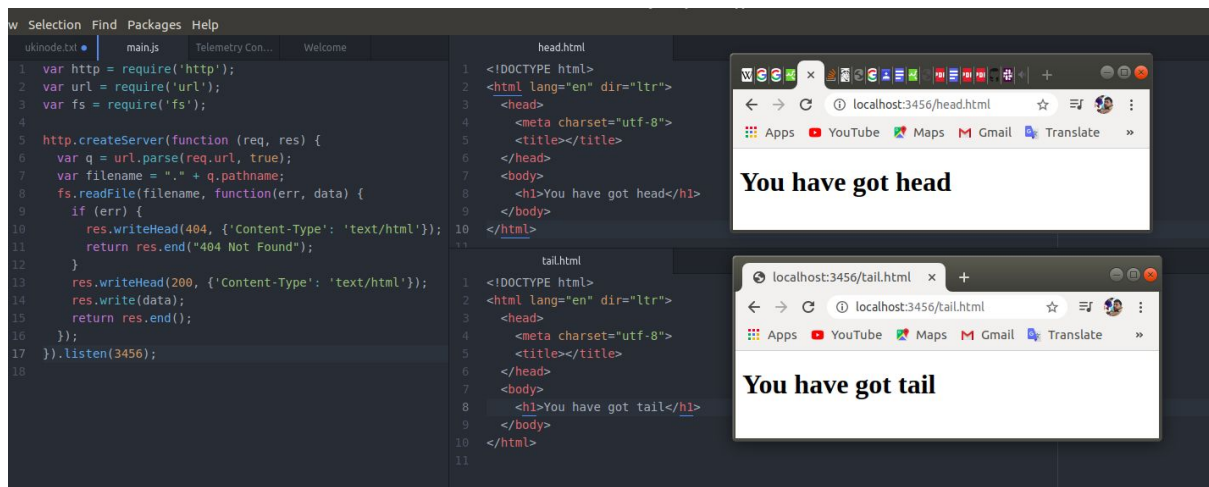nithar@nithar-Inspiron-5570: ~/

File Edit View Search Terminal Help

nithar@nithar-Inspiron-5570:~/Desktop/NodeJS
Deleted!
nithar@nithar-Inspiron-5570:~/Desktop/NodeJS

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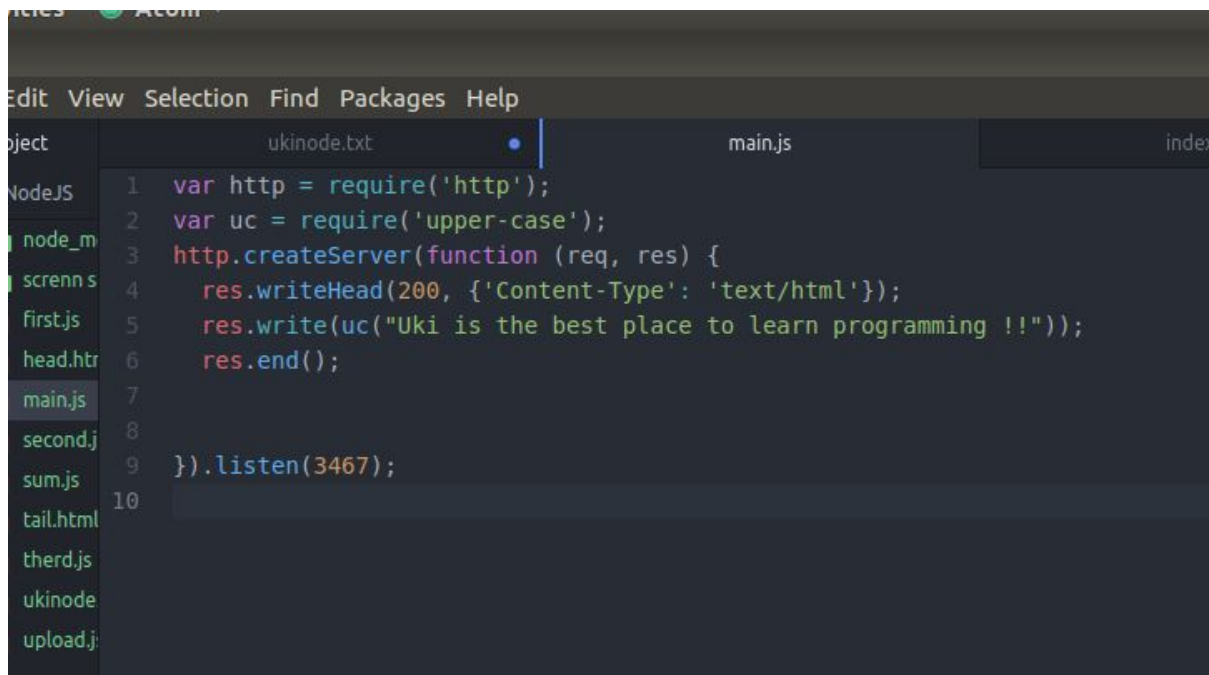
If you have followed the correct steps you should see two different results when opening these two addresses:

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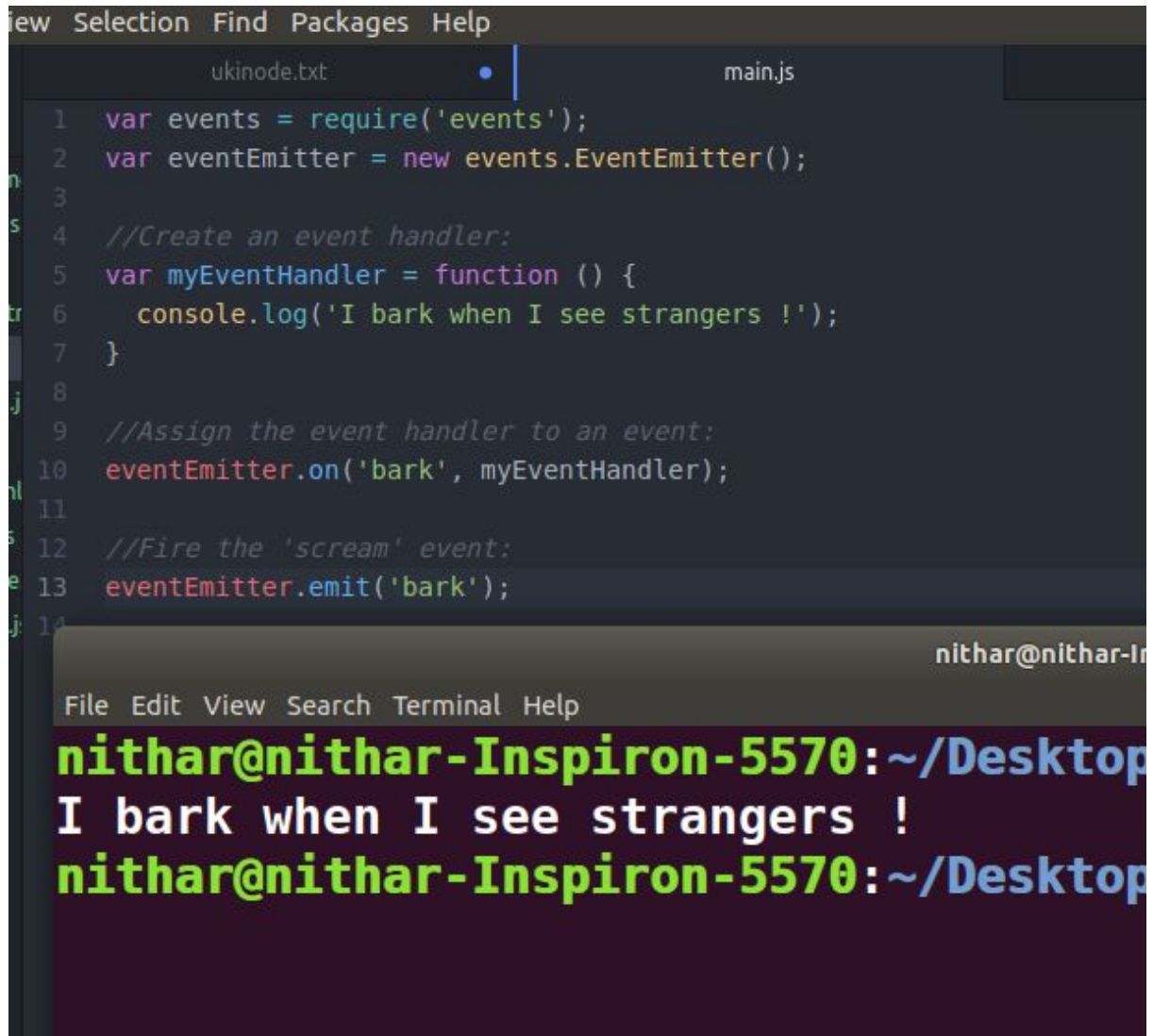
http://localhost:8080/tail.html -> You have got tail

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.
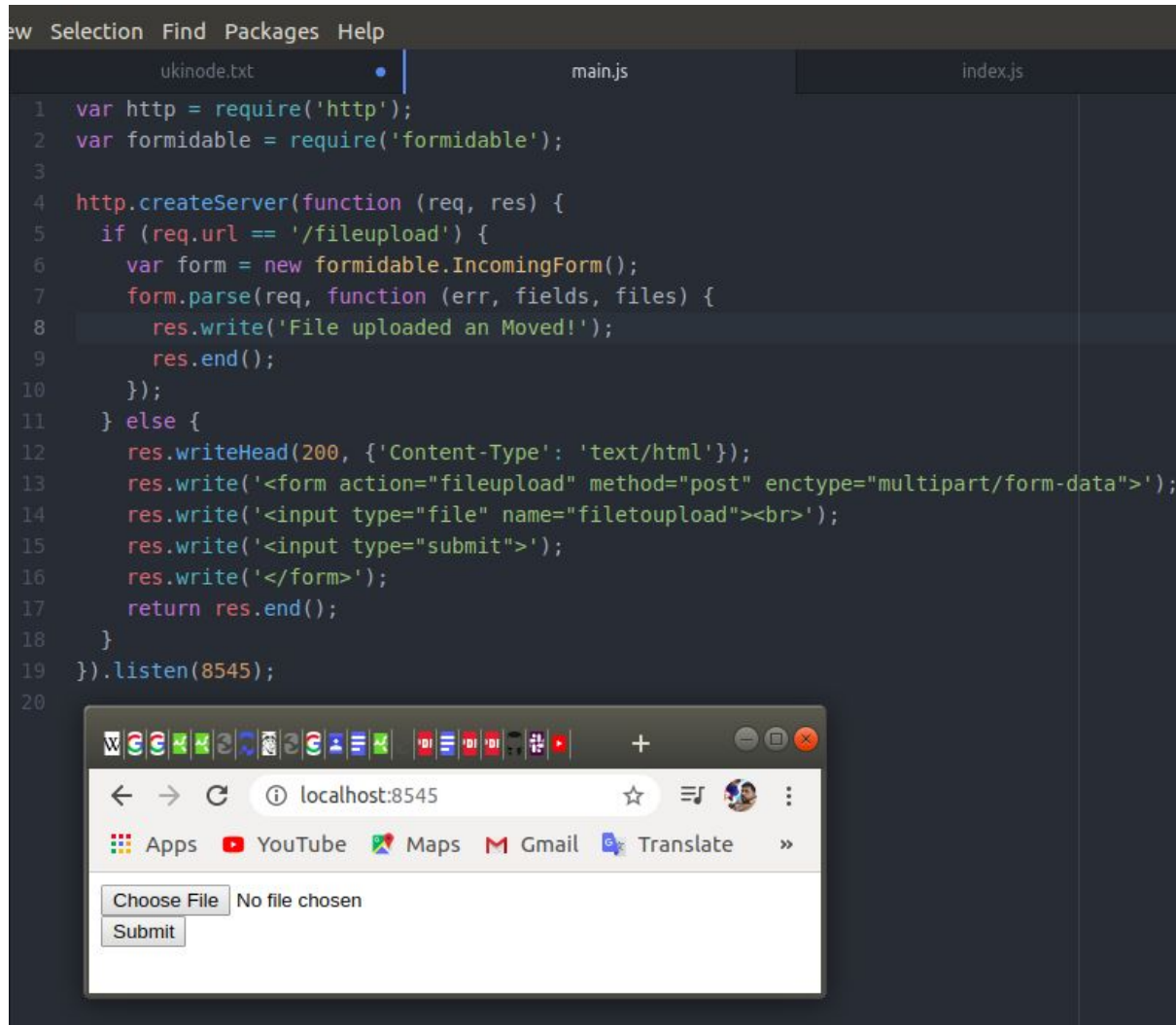
ukinode.txt   main.js

```
1   var events = require('events');
2   var eventEmitter = new events.EventEmitter();
3
4   //Create an event handler:
5   var myEventHandler = function () {
6     console.log('I bark when I see strangers !');
7   }
8
9   //Assign the event handler to an event:
10  eventEmitter.on('bark', myEventHandler);
11
12  //Fire the 'scream' event:
13  eventEmitter.emit('bark');
14
```

nithar@nithar-Ir

File Edit View Search Terminal Help

```
nithar@nithar-Inspiron-5570:~/Desktop
I bark when I see strangers !
nithar@nithar-Inspiron-5570:~/Desktop
```

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

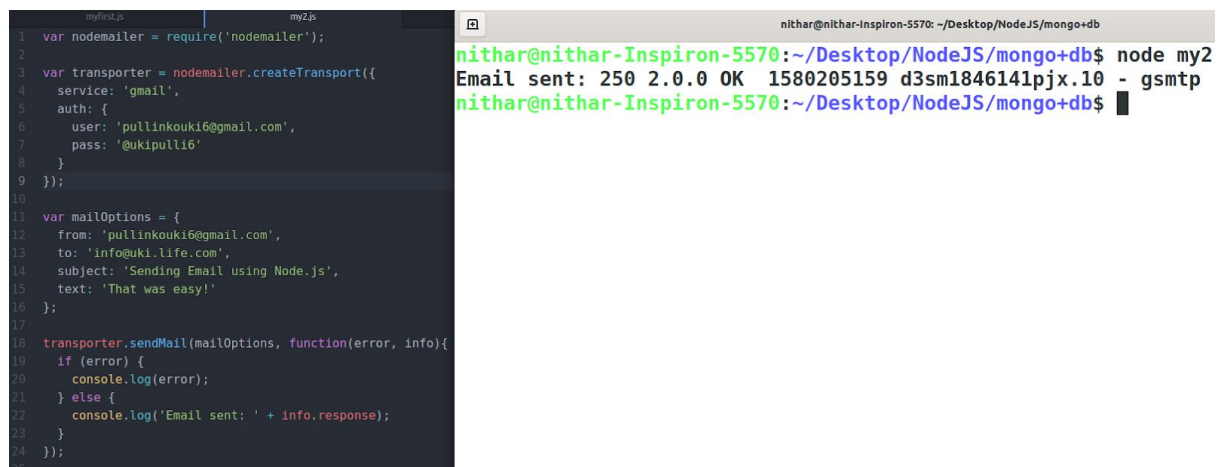7.1 Save that uploaded file into your Documents directory.

```
ew  Selection  Find  Packages  Help
            ukinode.txt              •  |        main.js                              index.js
  1    var http = require('http');
  2    var formidable = require('formidable');
  3
  4    http.createServer(function (req, res) {
  5      if (req.url == '/fileupload') {
  6        var form = new formidable.IncomingForm();
  7        form.parse(req, function (err, fields, files) {
  8          res.write('File uploaded an Moved!');
  9          res.end();
 10        });
 11      } else {
 12        res.writeHead(200, {'Content-Type': 'text/html'});
 13        res.write('<form action="fileupload" method="post" enctype="multipart/form-data">');
 14        res.write('<input type="file" name="filetoupload"><br>');
 15        res.write('<input type="submit">');
 16        res.write('</form>');
 17        return res.end();
 18      }
 19    }).listen(8545);
 20
```

localhost:8545

Choose File No file chosen
Submit

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.

```
        myfirst.js              my2.js
  1  var nodemailer = require('nodemailer');
  2
  3  var transporter = nodemailer.createTransport({
  4    service: 'gmail',
  5    auth: {
  6      user: 'pullinkouki6@gmail.com',
  7      pass: '@ukipulli6'
  8    }
  9  });
 10
 11  var mailOptions = {
 12    from: 'pullinkouki6@gmail.com',
 13    to: 'info@uki.life.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  });
```

```
                nithar@nithar-Inspiron-5570: ~/Desktop/NodeJS/mongo+db
nithar@nithar-Inspiron-5570:~/Desktop/NodeJS/mongo+db$ node my2
Email sent: 250 2.0.0 OK  1580205159 d3sm1846141pjx.10 - gsmtp
nithar@nithar-Inspiron-5570:~/Desktop/NodeJS/mongo+db$
```