

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.

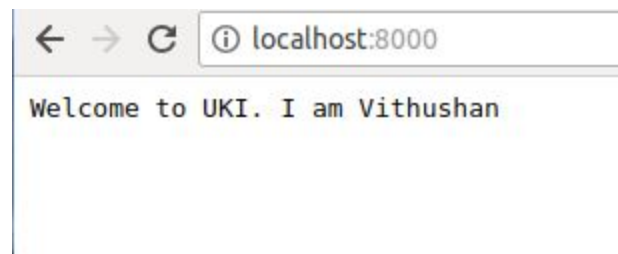
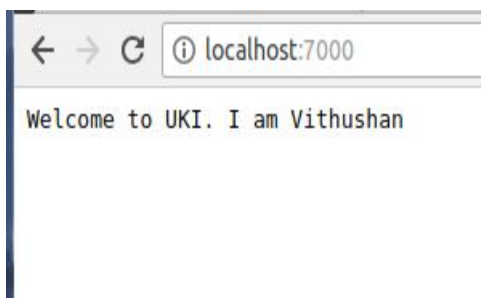
```
sum.js x
1  var http = require('http');
2
3  var a,b;
4  a = 123;
5  b = 321;
6  var sum = a + b;
7
8  http.createServer(function (req, res) {
9      res.writeHead(200, {'Content-Type': 'text/plain'});
10     res.end(sum);
11 }).listen(8080);
12
```

```
three.js | sum.js | add.js
1  var http = require('http');
2  const add = require('./add.js');
3  var result = add.addition(123,321);
4  var result1 = add.average(123,321);
5  //create a server object:
6  http.createServer(function (req, res) {
7      res.write('The' + ' sum' + ' is' + " " + result + '\n');
8      res.write('The' + ' average' + ' is' + " " + result1);
9      res.end(); //end the response
10 }).listen(8080); //the server object listens on port 8080
11
```

```
1 module.exports.addition = (a,b) => {  
2   return a + b;  
3 }  
4 module.exports.average = (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)

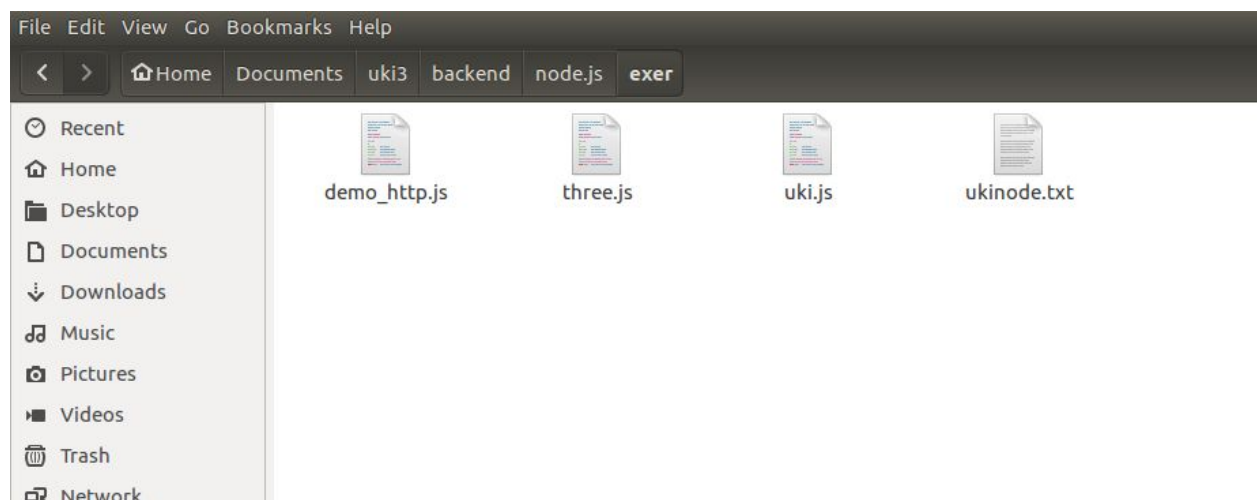
```
demo_http.js  
1 var http = require('http');  
2  
3 http.createServer(function (req,res) {  
4   res.write('Welcome to UKI. I am Vithushan');  
5   res.end();  
6 }).listen(8000);  
7
```



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

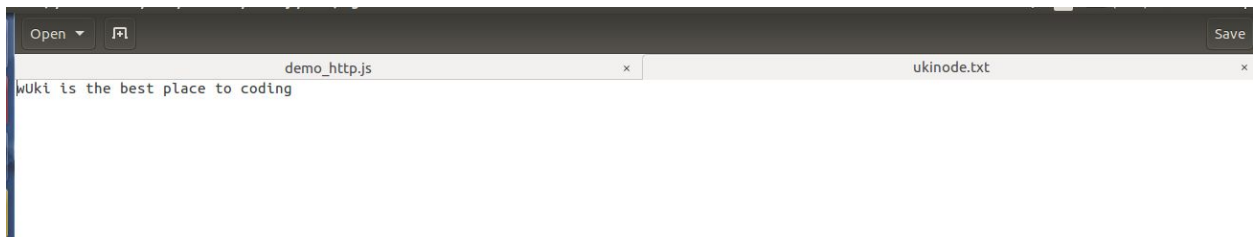
```
demo_http.js | three.js
1 var fs = require('fs');
2 fs.appendFile('ukinode.txt','', function (err) {
3   if (err) throw err;
4 })
```

```
ukistu03@ukipc03: ~/Documents/uki3/backend/node.js/exer
ukistu03@ukipc03:~/Documents/uki3/backend/node.js/exer$ node uki.js
^C
ukistu03@ukipc03:~/Documents/uki3/backend/node.js/exer$ node demo_http.js
^C
ukistu03@ukipc03:~/Documents/uki3/backend/node.js/exer$ node demo_http.js
^[[A
^C
ukistu03@ukipc03:~/Documents/uki3/backend/node.js/exer$ node demo_http.js
^C
ukistu03@ukipc03:~/Documents/uki3/backend/node.js/exer$ node three.js
ukistu03@ukipc03:~/Documents/uki3/backend/node.js/exer$
```



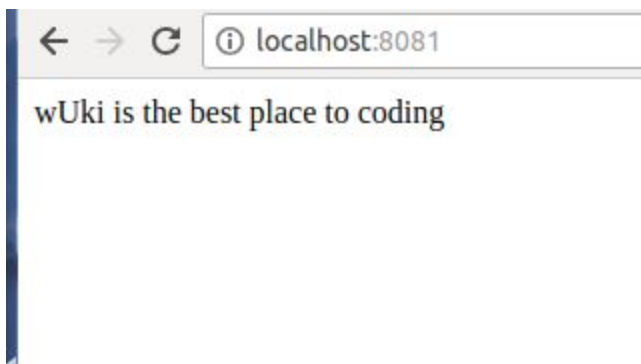
3.1 Write a paragraph about Uki into that file

```
demo_http.js | three.js
1 var fs = require('fs');
2 fs.appendFile('ukinode.txt', 'Uki is the best place to coding', function (err) {
3   if (err) throw err;
4 })
5
```

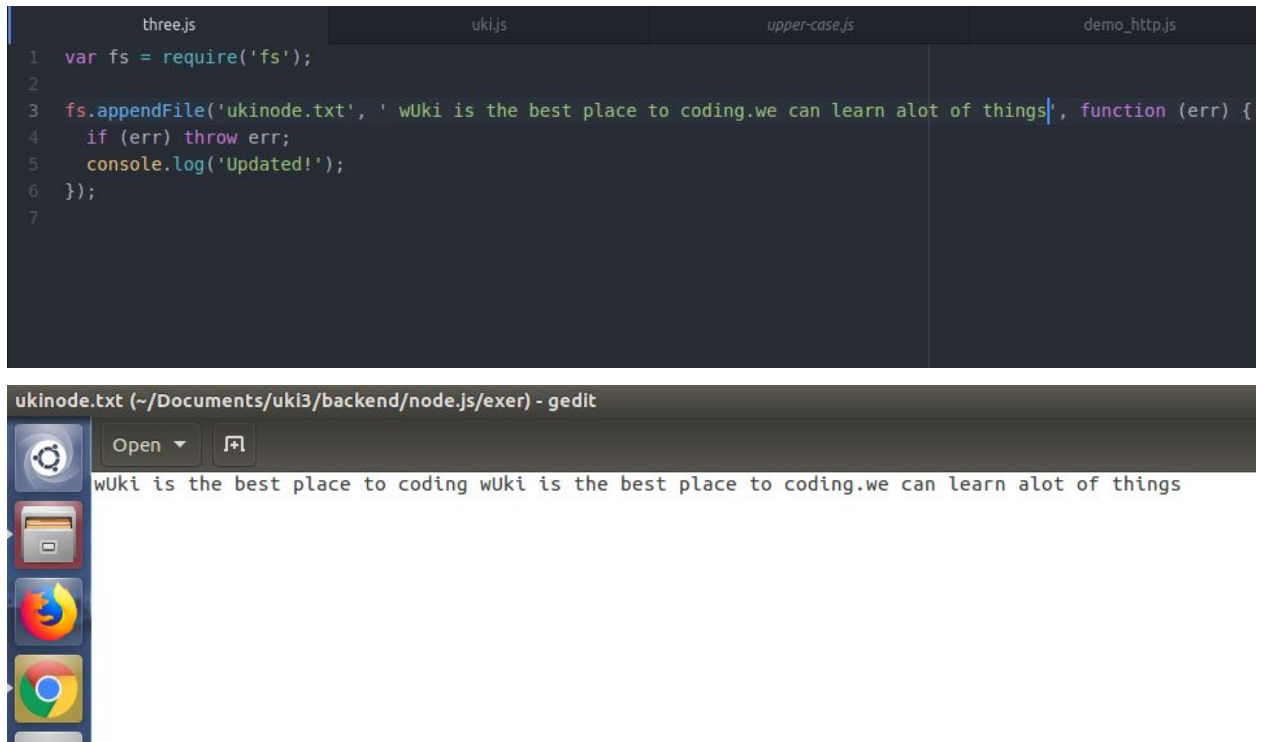


3.2 Serve that file to the client (Read File) over your server

```
demo_http.js | three.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(data);
7     res.end();
8   });
9 }).listen(8081);
10
```



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



```
three.js
1 var fs = require('fs');
2
3 fs.appendFile('ukinode.txt', ' wUki is the best place to coding.we can learn alot of things', function (err) {
4   if (err) throw err;
5   console.log('Updated!');
6 });
7
```

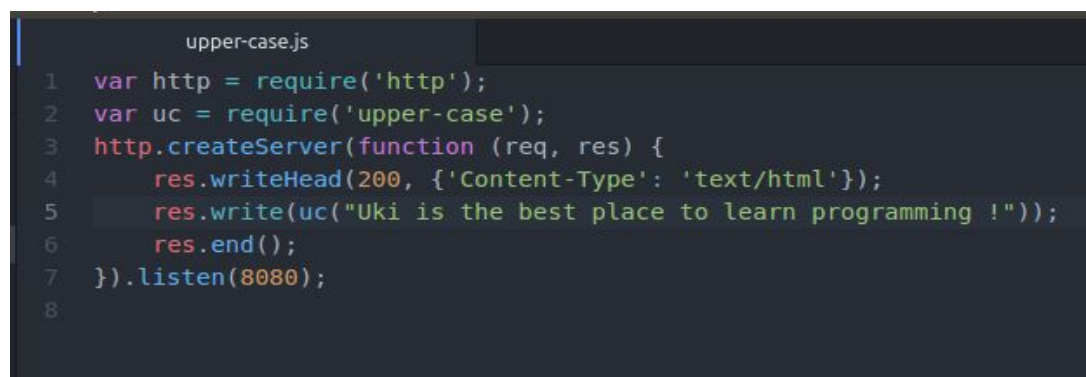
ukinode.txt (~/.Documents/uki3/backend/node.js/exer) - gedit

wUki is the best place to coding wUki is the best place to coding.we can learn alot of things

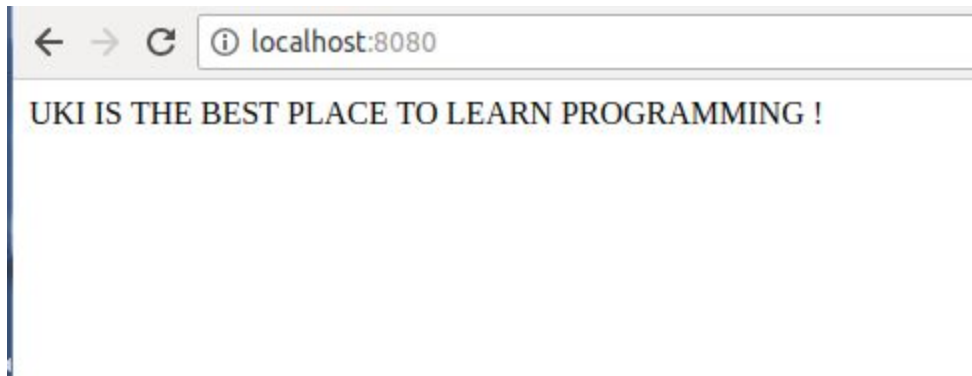
5. Install the package “upper-case” using NPM and create a Node.js file that will convert the output "Uki is the best place to learn programming !" into upper-case letters.

```
kistu03@ukipc03:~/Documents/uki3/backend/node.js$ npm install upper-case
home/ukistu03/Documents/uki3/backend/node.js
— upper-case@1.1.3

pm WARN enoent ENOENT: no such file or directory, open '/home/ukistu03/Document
/uki3/backend/node.js/package.json'
pm WARN node.js No description
pm WARN node.js No repository field.
pm WARN node.js No README data
pm WARN node.js No license field.
kistu03@ukipc03:~/Documents/uki3/backend/node.js$ cd exer/
kistu03@ukipc03:~/Documents/uki3/backend/node.js/exer$ node upper-case.js
```



```
upper-case.js
1 var http = require('http');
2 var uc = require('upper-case');
3 http.createServer(function (req, res) {
4   res.writeHead(200, {'Content-Type': 'text/html'});
5   res.write(uc("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.

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.

```
1  var http = require('http');
2
3  http.createServer(function (req, res) {
4    res.writeHead(200, {'Content-Type': 'text/html'});
5    res.write('<form action="fileupload" method="post" enctype="multipart/form-data">');
6    res.write('<input type="file" name="filetoupload"><br>');
7    res.write('<input type="submit">');
8    res.write('</form>');
9    return res.end();
10 }).listen(8080);
11
```



```

    uploadingFiles2.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');
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="fileupload"><br>');
15      res.write('<input type="submit">');
16      res.write('</form>');
17      return res.end();
18    }
19  }).listen(8080);
20

```

```

    uploadingFiles3.js
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/ukistu03/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

```