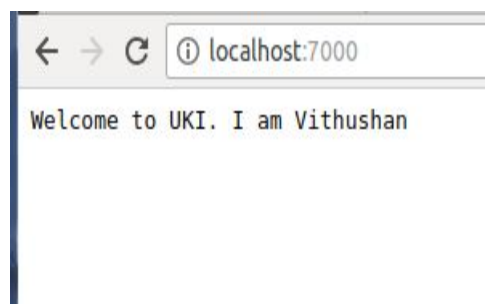1. Create a custom module which returns the sum and average of any two numbers passed into it. Require the module and run the server by passing 123 and 321 so that the server prints out the sum and average.

```
                    sum.js              ✕
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
```

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)
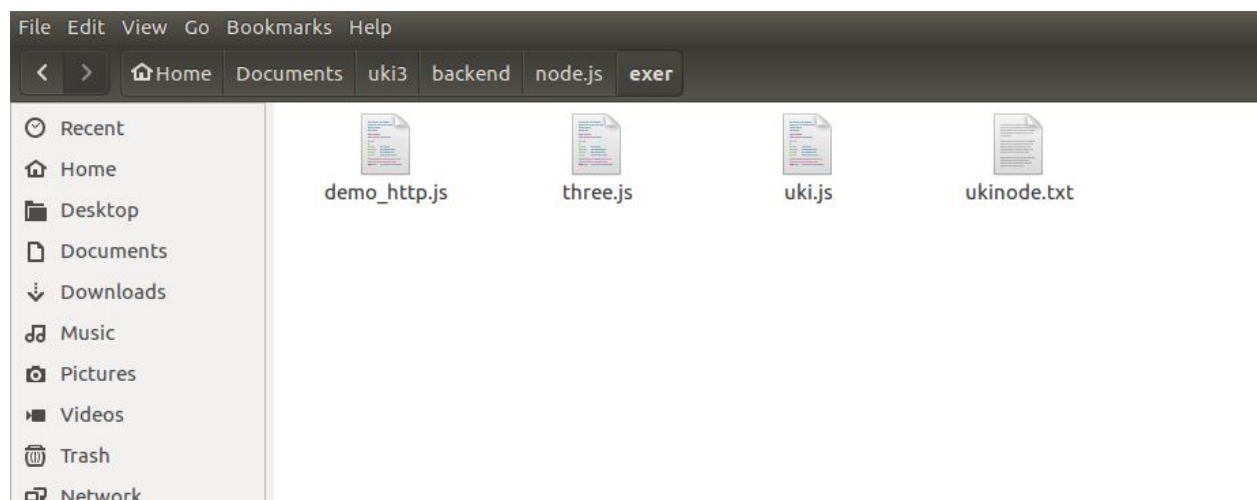
```
          demo_http.js

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
```

← → C ⓘ localhost:7000

Welcome to UKI. I am Vithushan

← → C ⓘ localhost:8000

Welcome to UKI. I am Vithushan

3. Using the file system module create a new file called ukinode.txt
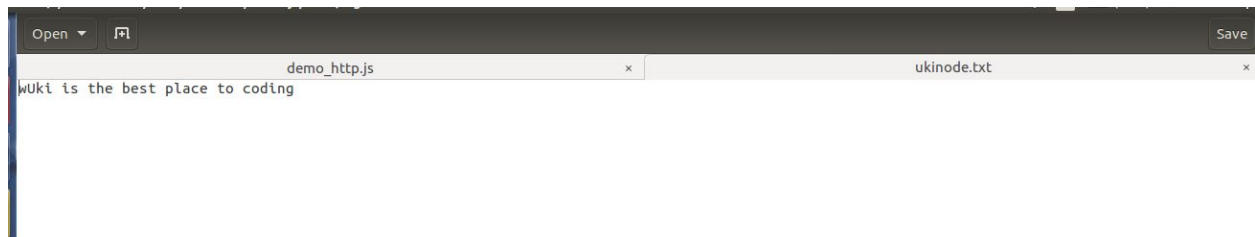
```
                 demo_http.js                        three.js
1    var fs = require('fs');
2    fs.appendFile('ukinode.txt','', function (err) {
3      if (err) throw err;
4    })
5
```

```
⊗ ⊖ ⊙  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$ █
```

File Edit View Go Bookmarks Help

< >   ⌂ Home   Documents   uki3   backend   node.js   **exer**

⊘ Recent
⌂ Home
▬ Desktop
▯ Documents
⬇ Downloads
♫ Music
⬤ Pictures
▸▬ Videos
🗑 Trash
⧉ Network

demo_http.js   three.js   uki.js   ukinode.txt
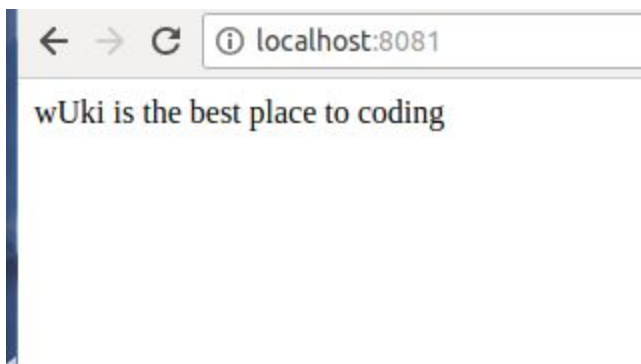
3.1 Write a paragraph about Uki into that file

```
            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
```
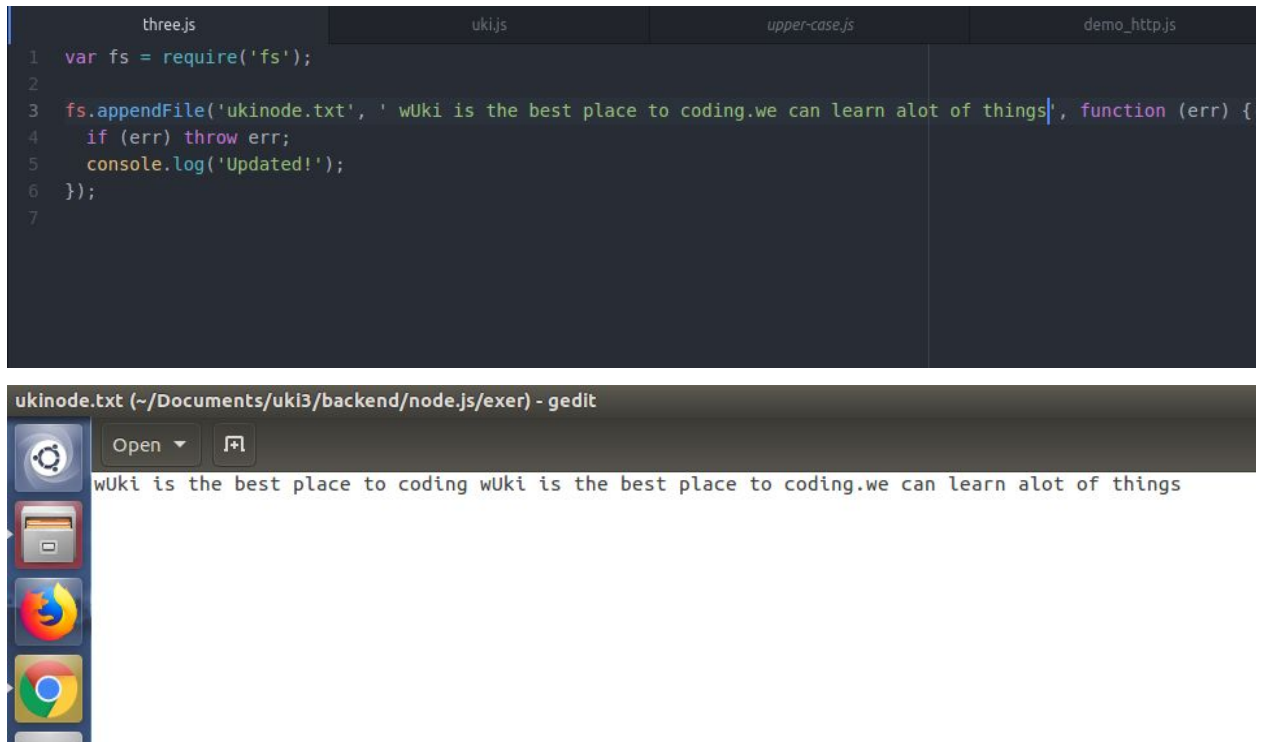
```
            demo_http.js                    ×              ukinode.txt                      ×
wUki is the best place to coding
```

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   |
```

```
←  →  C   ⓘ localhost:8081

wUki is the best place to coding
```

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

```
three.js                    uki.js              upper-case.js           demo_http.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

Open ▼

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.

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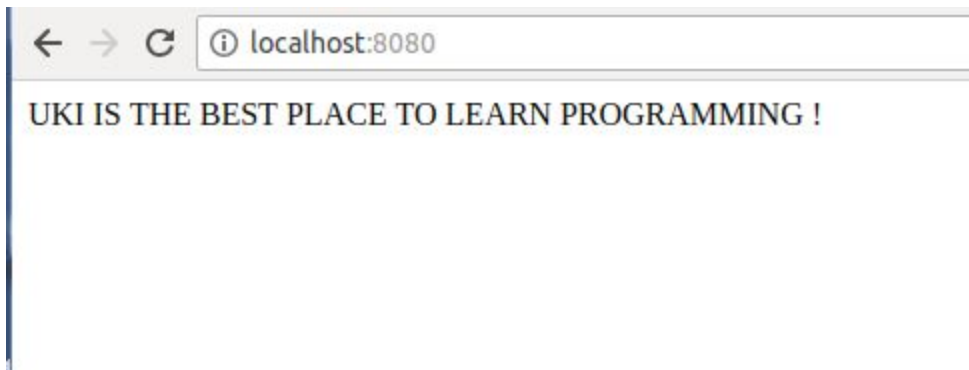
```
ukistu03@ukipc03:~/Documents/uki3/backend/node.js$ npm install upper-case
/home/ukistu03/Documents/uki3/backend/node.js
└── upper-case@1.1.3

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

← → C ⓘ localhost:8080

UKI IS THE BEST PLACE TO LEARN PROGRAMMING !

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.

```javascript
var http = require('http');

http.createServer(function (req, res) {
  res.writeHead(200, {'Content-Type': 'text/html'});
  res.write('<form action="fileupload" method="post" enctype="multipart/form-data">');
  res.write('<input type="file" name="filetoupload"><br>');
  res.write('<input type="submit">');
  res.write('</form>');
  return res.end();
}).listen(8080);
```

uploadingFiles2.js

```javascript
var http = require('http');
var formidable = require('formidable');

http.createServer(function (req, res) {
  if (req.url == '/fileupload') {
    var form = new formidable.IncomingForm();
    form.parse(req, function (err, fields, files) {
      res.write('File uploaded');
      res.end();
    });
  } else {
    res.writeHead(200, {'Content-Type': 'text/html'});
    res.write('<form action="fileupload" method="post" enctype="multipart/form-data">');
    res.write('<input type="file" name="filetoupload"><br>');
    res.write('<input type="submit">');
    res.write('</form>');
    return res.end();
  }
}).listen(8080);
```

```javascript
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.filetoupload.path;
10         var newpath = '/home/ukistu03/Desktop' + 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(8080);
26
```