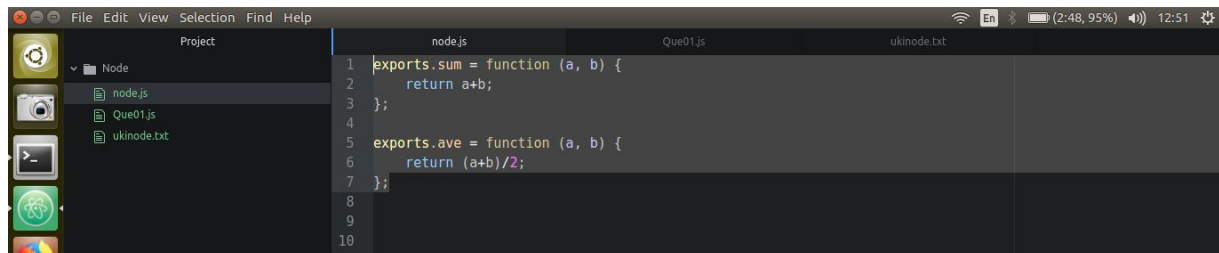1. Create a custom module which returns the sum and average of any two numbers passed into it. Require the module and run the server by passing 123 and 321 so that the server prints out the sum and average.
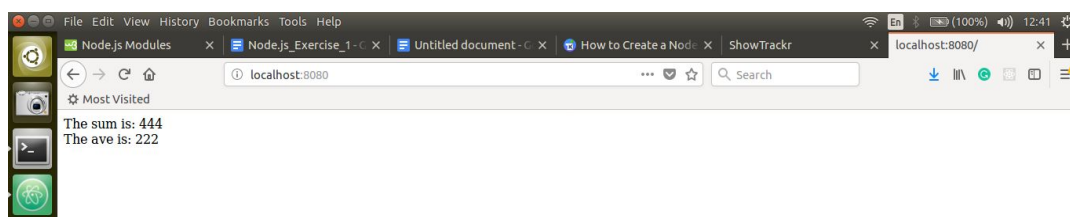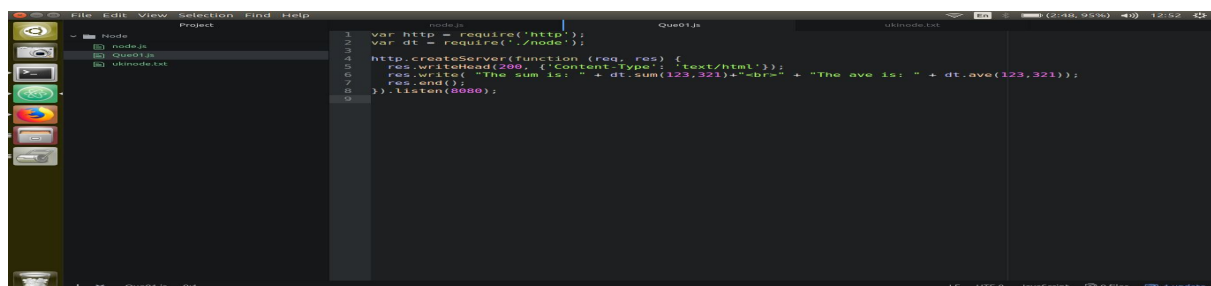
```
exports.sum = function (a, b) {
  return a+b;
};


exports.ave = function (a, b) {
  return (a+b)/2;
};
```
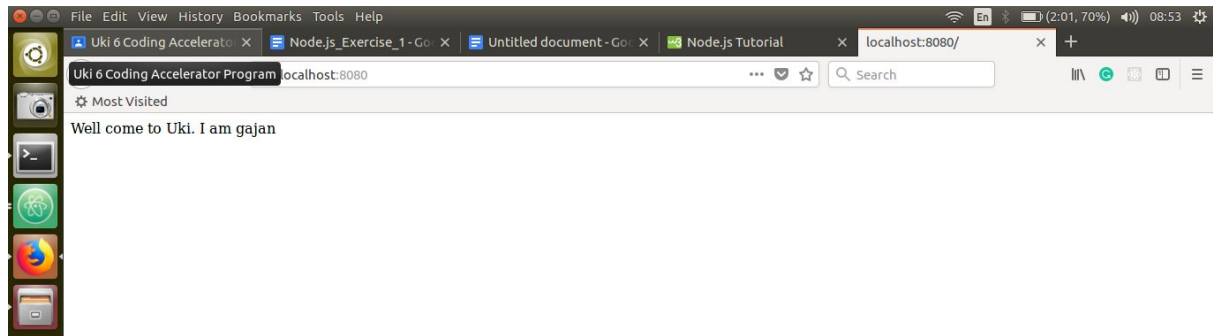


```
var http = require('http');
var dt = require('./node');

http.createServer(function (req, res) {
res.writeHead(200, {'Content-Type': 'text/html'});
res.write( "The sum is: " + dt.sum(123,321)+"<br>" + "The ave is: " + dt.ave(123,321));
res.end();
}).listen(8080);
```

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)

```
var http = require('http');
  http.createServer(function (req, res) {
   res.writeHead(200, {'Content-Type': 'text/html'});
   res.end('Well come to Uki. I am gajan');
   }).listen(8080);
```
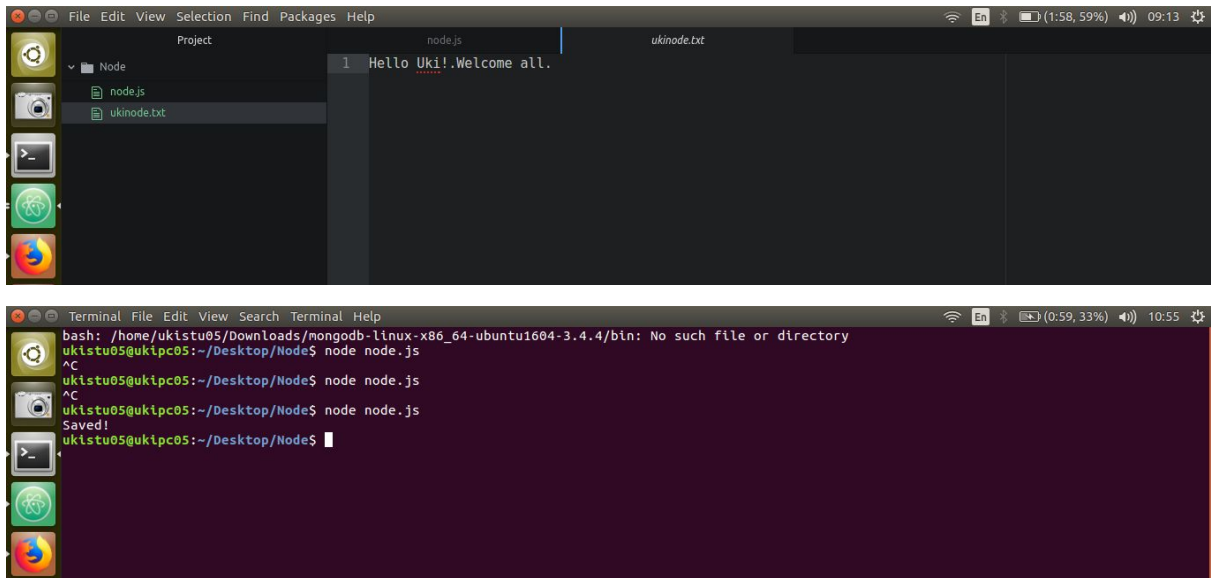


```
var http = require('http');
http.createServer(function (req, res) {
  res.writeHead(200, {'Content-Type': 'text/html'});
  res.end('Well come to Uki. I am gajan');
}).listen(8000);
```

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

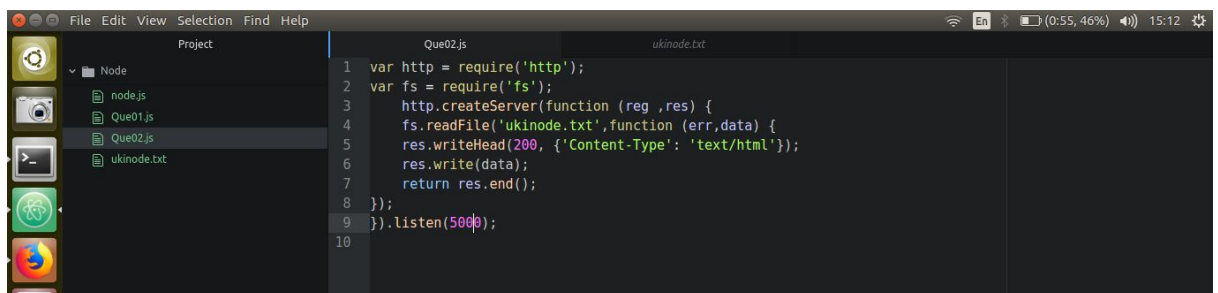   3.1 Write a paragraph about Uki into that file

```
var fs = require('fs');
fs.appendFile('ukinode.txt', 'Hello Uki!.Welcome all.', function (err) {
 if (err) throw err
 console.log('Saved!');
});
```
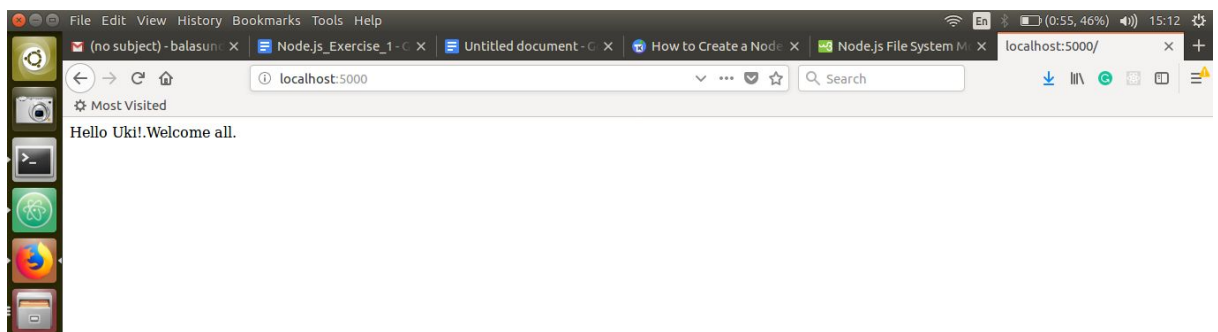

   3.2 Serve that file to the client (Read File) over your server

```
var http = require('http');
var fs = require('fs');
        http.createServer(function (reg ,res) {
        fs.readFile('ukinode.txt',function (err,data) {
        res.writeHead(200, {'Content-Type': 'text/html'});
        res.write(data);
        return res.end();
});
```
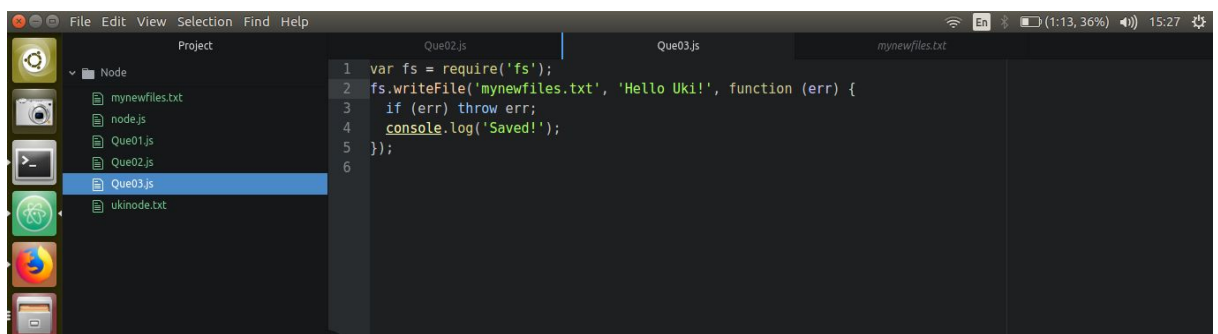
```
}).listen(5000);
```


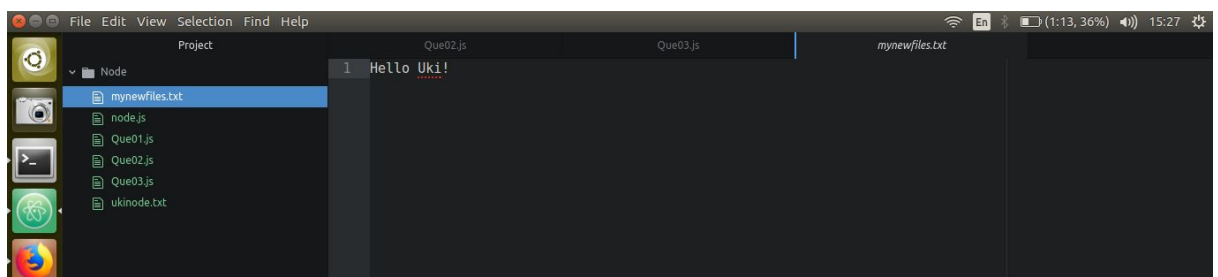3.3 Append another paragraph about Uki and now serve the new file

```
    var fs = require('fs');
fs.writeFile('mynewfiles.txt', 'Hello Uki!', function (err) {
  if (err) throw err;
  console.log('Saved!');
});
```


3.4 Rename the file as ukinodejsexercise1.txt

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

});

3.5 Delete the file you created

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

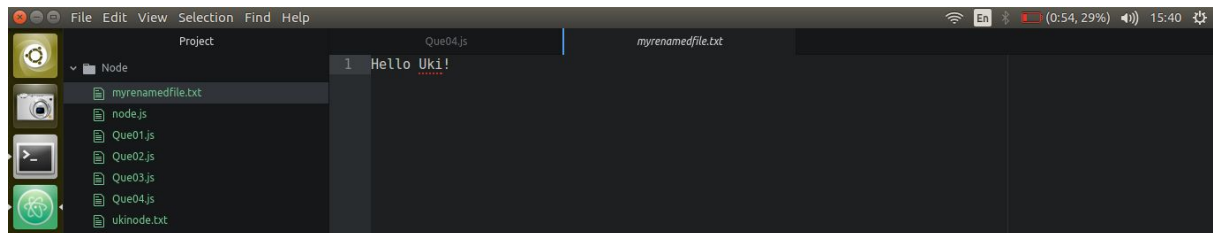4. Create two html files called head.html which is a web page which says 'you have got head ' and tail.html which is a web page which says 'you have got tail' and save them in the same folder as your node.js files. Create a Node.js file that opens the requested file and returns the content to the client.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

```html
<!DOCTYPE html>
<html>
<body>
<h1>Head</h1>
<p>you have got head</p>
</body>
</html>
```

```html
<!DOCTYPE html>
<html>
<body>
<h1>Tail</h1>
<p>you have got tail</p>
</body>
</html>
```

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

http.createServer(function (req, res) {
  var q = url.parse(req.url, true);
  var filename = "." + q.pathname;
  fs.readFile(filename, function(err, data) {
        if (err) {
        res.writeHead(404, {'Content-Type': 'text/html'});
        return res.end("404 Not Found");
        }
        res.writeHead(200, {'Content-Type': 'text/html'});
        res.write(data);
        return res.end();
  });
}).listen(8080);
```

head.html × Que06.js tail.html

/home/ukistu05/Desktop/Node/head.html

Project
Node
- head.html
- node.js
- Que01.js
- Que02.js
- Que03.js
- Que04.js
- Que05.js
- Que06.js
- tail.html
- ukinode.txt

```html
3  <body>
4  <h1>Head</h1>
5  <p>you have got head</p>
6  </body>
7  </html>
8
```

---

head.html Que06.js **tail.html** ×

/home/ukistu05/Desktop/Node/tail.html

Project
Node
- head.html
- node.js
- Que01.js
- Que02.js
- Que03.js
- Que04.js
- Que05.js
- Que06.js
- tail.html
- ukinode.txt

```html
1  <!DOCTYPE html>
2  <html>
3  <body>
4  <h1>Tail</h1>
5  <p>you have got tail</p>
6  </body>
7  </html>
8
```

---

head.html **Que06.js** × tail.html

/home/ukistu05/Desktop/Node/Que06.js

Project
Node
- head.html
- node.js
- Que01.js
- Que02.js
- Que03.js
- Que04.js
- Que05.js
- Que06.js
- tail.html
- ukinode.txt

```javascript
1  var http = require('http');
2  var url = require('url');
3  var fs = require('fs');
4
5  http.createServer(function (req, res) {
6    var q = url.parse(req.url, true);
7    var filename = "." + q.pathname;
8    fs.readFile(filename, function(err, data) {
9      if (err) {
10       res.writeHead(404, {'Content-Type': 'text/html'});
11       return res.end("404 Not Found");
12     }
13     res.writeHead(200, {'Content-Type': 'text/html'});
14     res.write(data);
15     return res.end();
16   });
17 }).listen(8080);
```

Untitled document - Goo × | Node.js URL Module × | localhost:8080/head.html × | +

localhost:8080/head.html

Most Visited

Head

you have got head

Untitled document - Goo × | Node.js URL Module × | localhost:8080/tail.html × | +

localhost:8080/tail.html

Most Visited

Tail

you have got tail

Untitled document - Goo × | Node.js URL Module × | localhost:8080/ × | +

localhost:8080/

Most Visited

404 Not Found