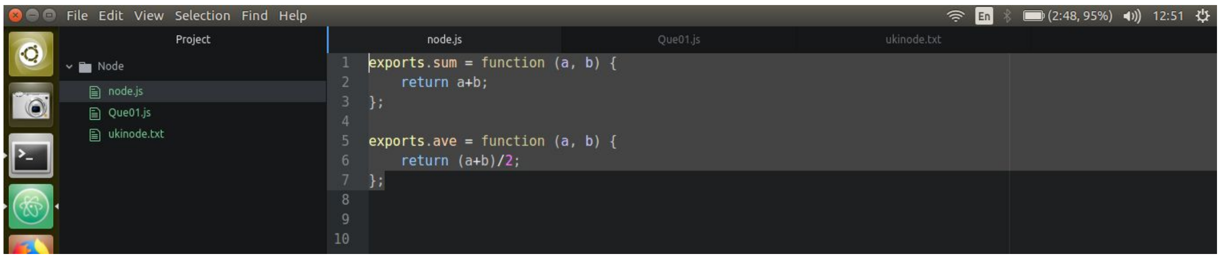
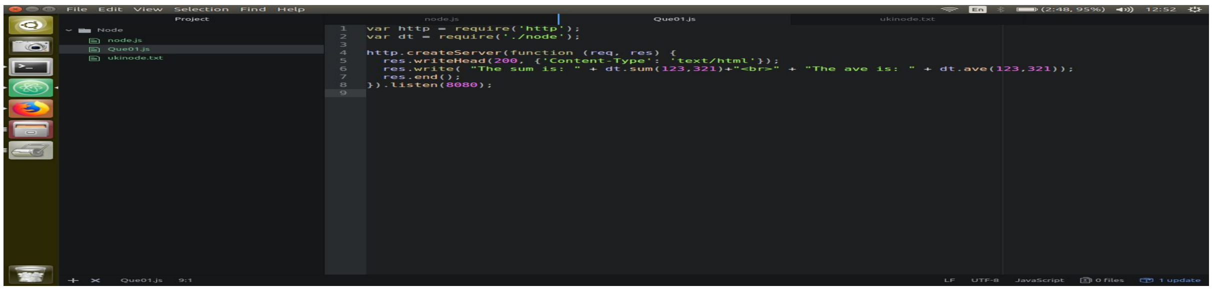
1. Create a custom module which returns the sum and average of any two numbers passed into it. Require the module and run the server by passing 123 and 321 so that the server prints out the sum and average.

```
exports.sum = function (a, b) {
  return a+b;
 };

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

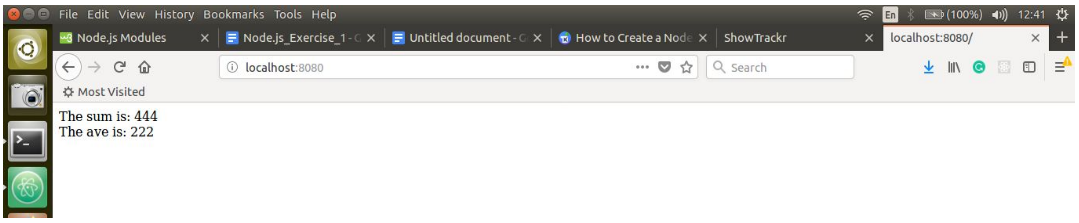


```
exports.sum = function (a, b) {
    return a+b;
};

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);
```



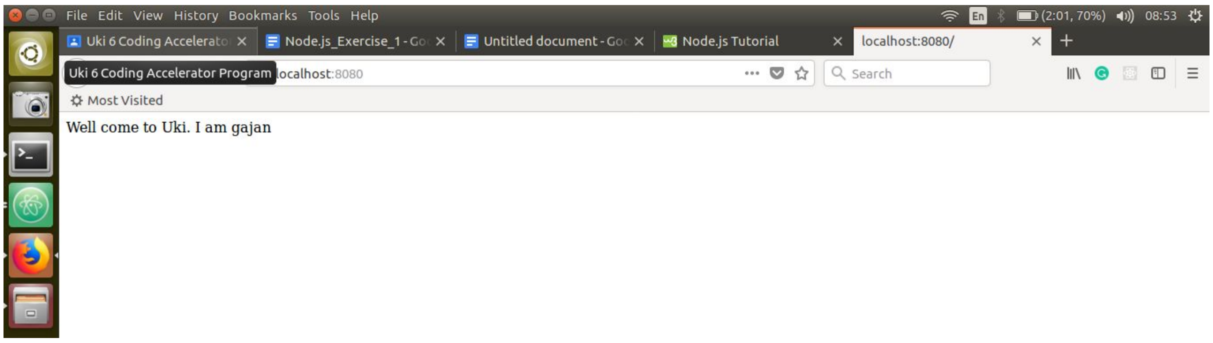
```
var http = require('http');
var dt = require('./node');

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);
```



```
The sum is: 444
The ave is: 222
```

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);
```



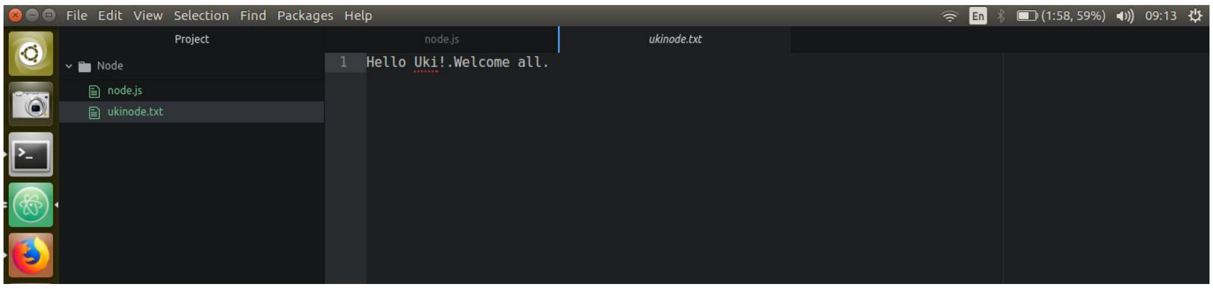
```
Well come to Uki. I am gajan
```

```
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);
```

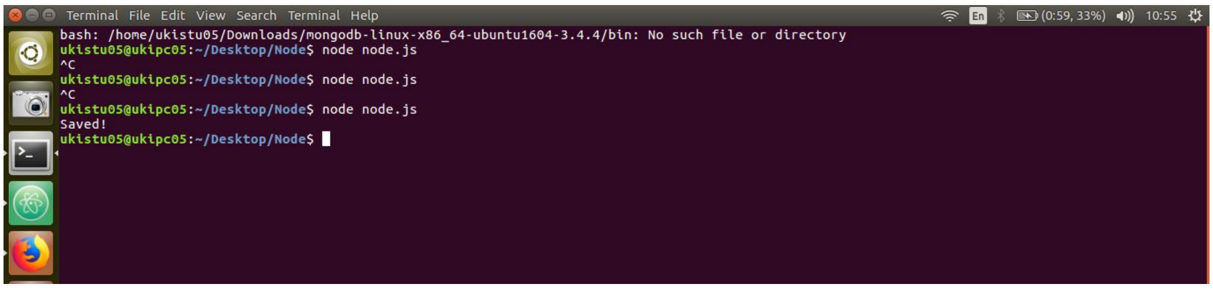
3. Using the file system module create a new file called ukinode.txt

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!');
});
```



```
Hello Uki!.Welcome all.
```

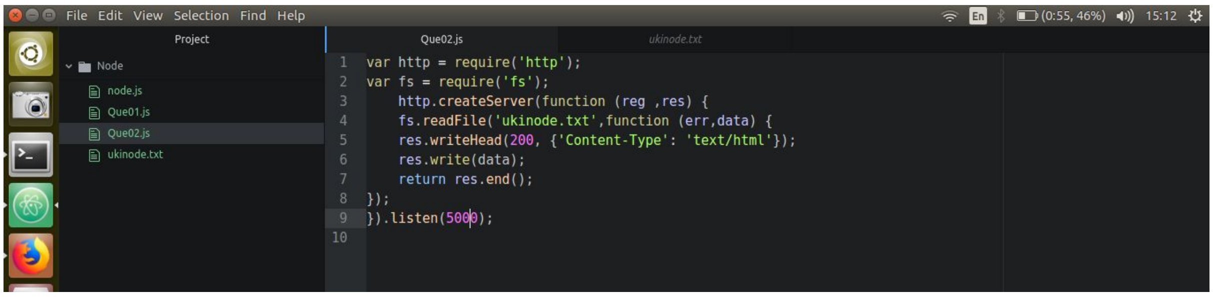


```
bash: /home/ukistu05/Downloads/mongodb-linux-x86_64-ubuntu1604-3.4.4/bin: No such file or directory
ukistu05@ukipc05:~/Desktop/Node$ node node.js
^C
ukistu05@ukipc05:~/Desktop/Node$ node node.js
^C
ukistu05@ukipc05:~/Desktop/Node$ node node.js
Saved!
ukistu05@ukipc05:~/Desktop/Node$ 
```

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();
});
```

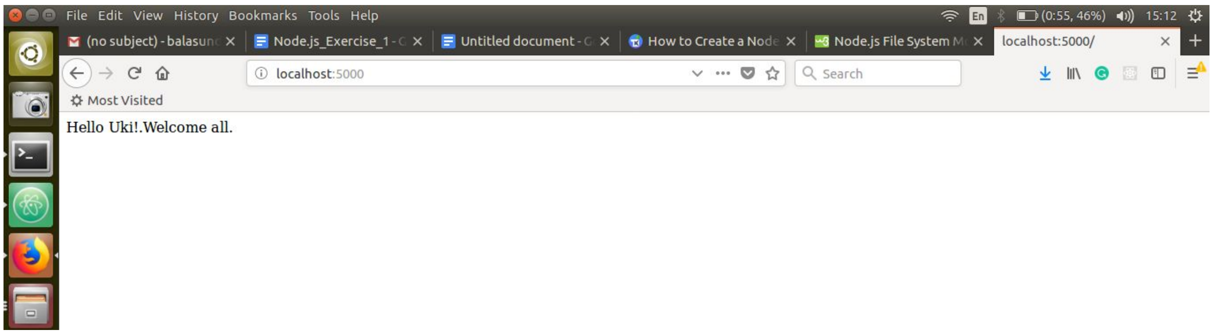
}).listen(5000);



Project
Node
node.js
Que01.js
Que02.js
ukinode.txt

Que02.js ukinode.txt

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



localhost:5000

```
Hello Uki!.Welcome all.
```

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

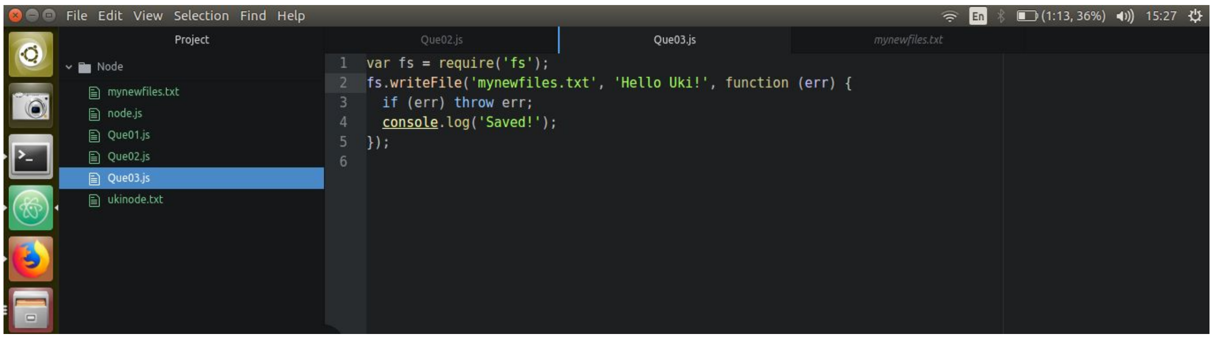
var fs = require('fs');

fs.writeFile('mynewfiles.txt', 'Hello Uki!', function (err) {

if (err) throw err;

console.log('Saved!');

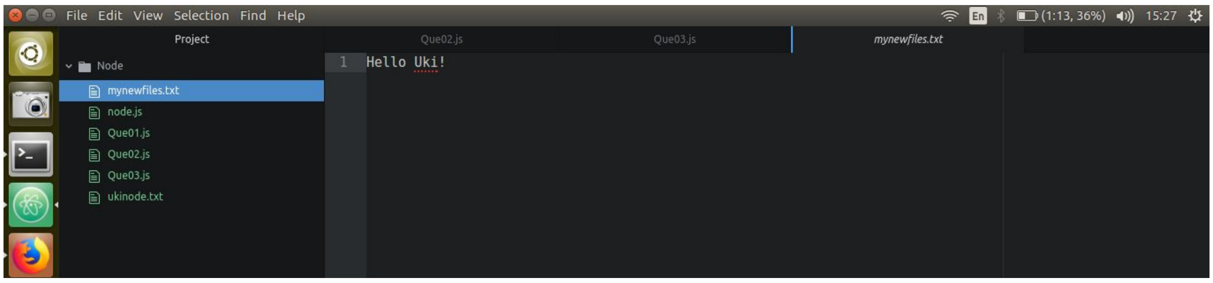
});



Project
Node
mynewfiles.txt
node.js
Que01.js
Que02.js
Que03.js
ukinode.txt

Que02.js Que03.js mynewfiles.txt

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



Que02.js Que03.js mynewfiles.txt

```
Hello Uki!
```

3.4 Rename the file as ukinodejsexercise1.txt

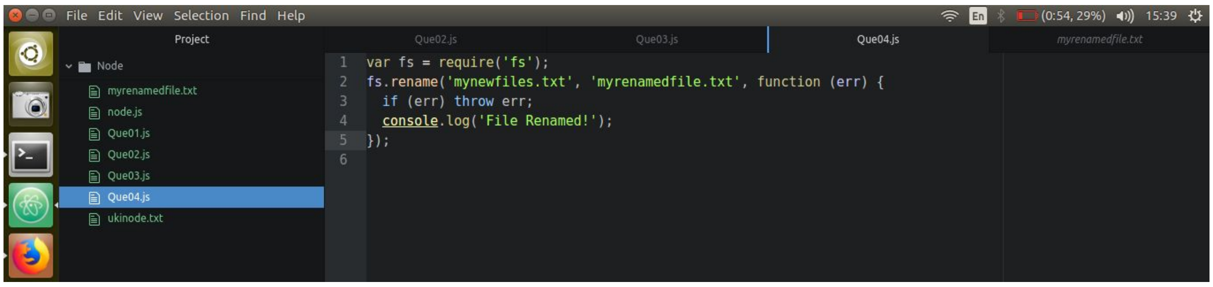
var fs = require('fs');

fs.rename('mynewfiles.txt', 'myrenamedfile.txt', function (err) {

if (err) throw err;

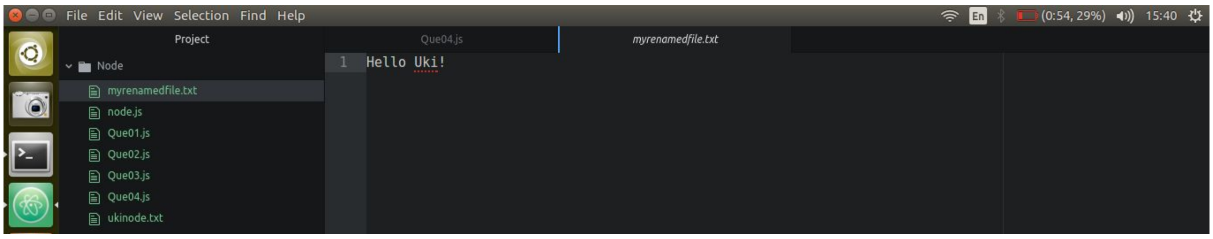
console.log('File Renamed!');

});



Node
myrenamedfile.txt
node.js
Que01.js
Que02.js
Que03.js
Que04.js
ukinode.txt

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



```
Hello Uki!
```

3.5 Delete the file you created

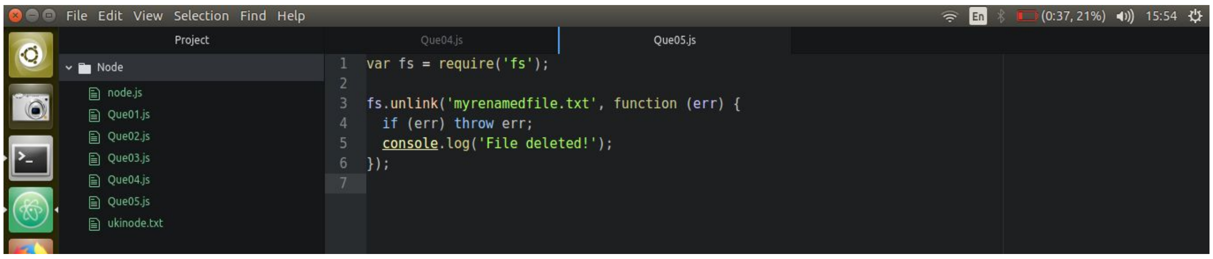
  var fs = require('fs');

fs.unlink('myrenamedfile.txt', function (err) {

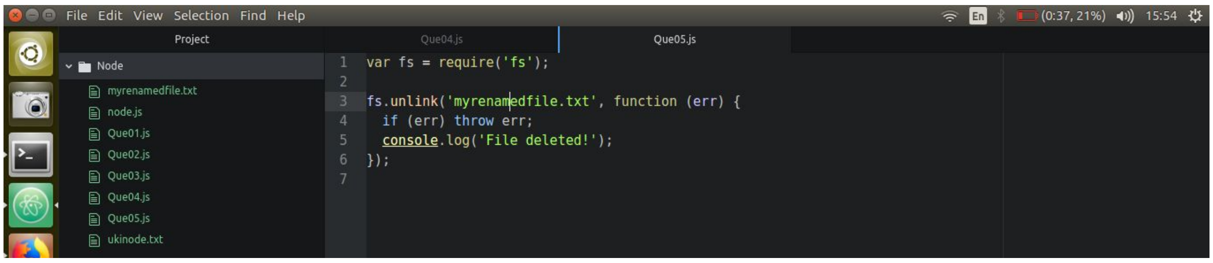
  if (err) throw err;

  console.log('File deleted!');

});



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

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



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

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

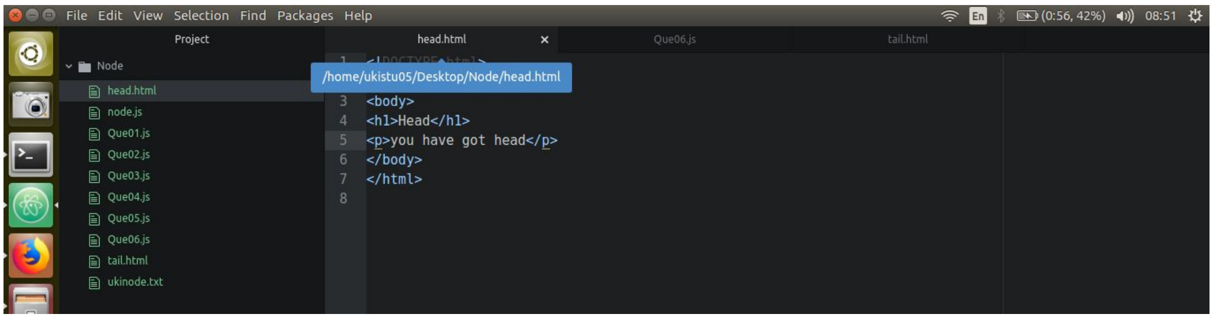
4. Create two html files called head.html which is a web page which says ‘you have got head ‘ and tail.html which is a web page which says ‘you have got tail’ and save them in the same folder as your node.js files. Create a Node.js file that opens the requested file and returns the content to the client.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

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

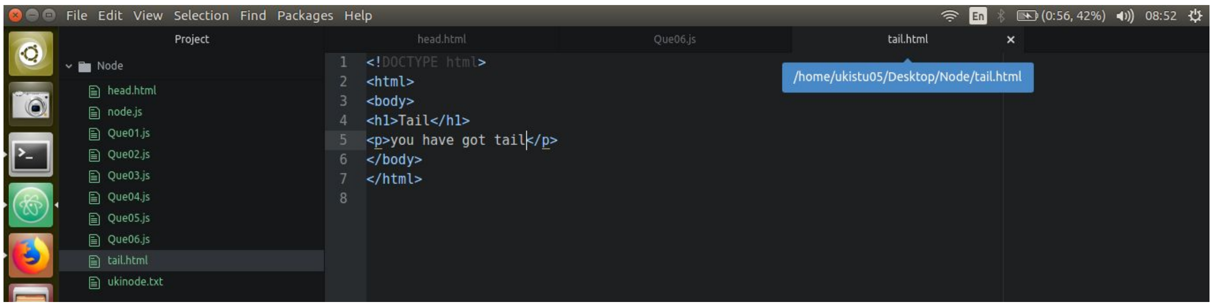
```
<!DOCTYPE html>
<html>
<body>
<h1>Tail</h1>
<p>you have got tail</p>
</body>
</html>
```

```
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);
```



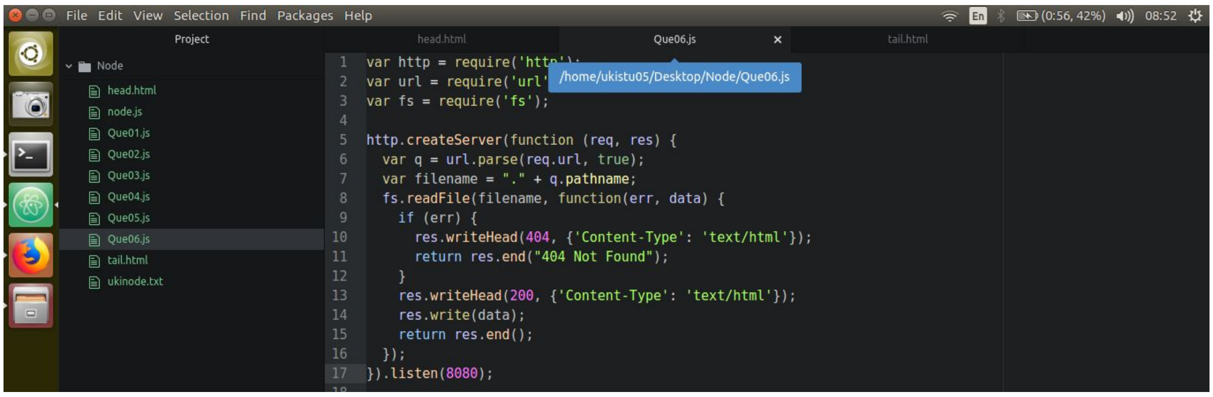
/home/ukistu05/Desktop/Node/head.html

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



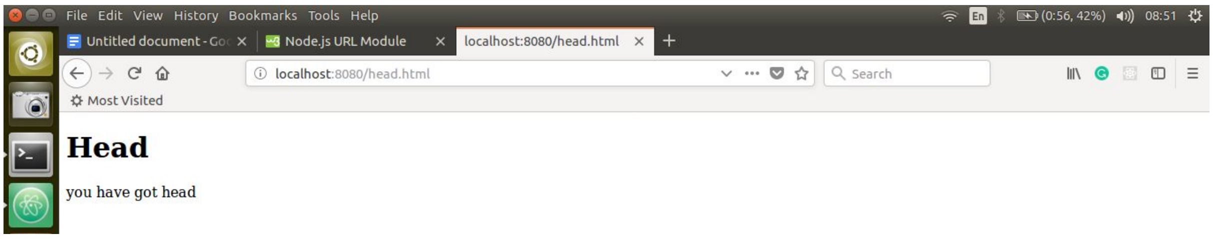
/home/ukistu05/Desktop/Node/tail.html

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



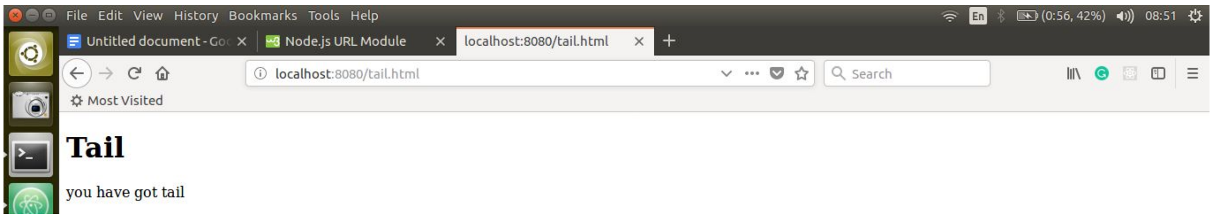
/home/ukistu05/Desktop/Node/Que06.js

```
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);
```



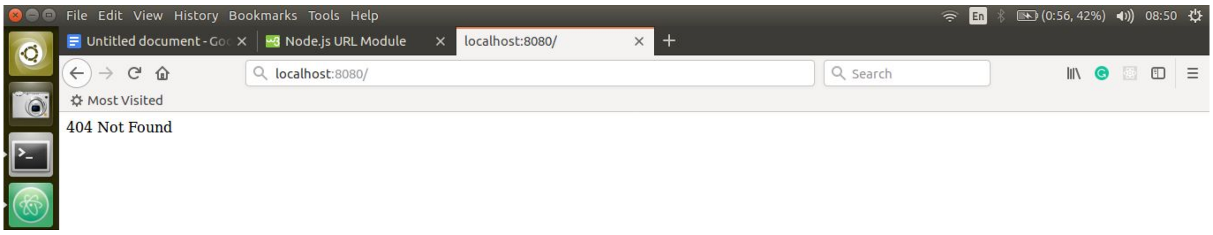
Head

you have got head



Tail

you have got tail



404 Not Found