

Node.js Exercise 1

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(x,y) {  
  var x=1;  
  var y=2;  
  return (x+y);  
};  
exports.avg=function(x,y) {  
  var x=1;  
  var y=2;  
  return (x+y)/2;  
};
```

```
var http = require('http');  
var dt = require('./ex1.js');  
  
http.createServer(function (req, res) {  
  res.writeHead(200, {'Content-Type': 'text/html'});  
  res.write("Sum: " + dt.sum() + "<br>" + "Average:" + dt.avg());  
  res.end();  
}).listen(8000)
```

Sum: 3
Average:1.5

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/plain'});
  res.end('Welcome to Uki. I am Aruntha');
}).listen(8000);
```

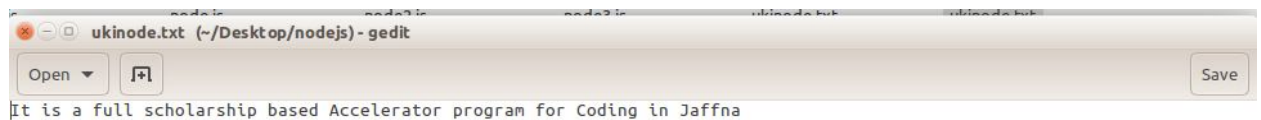
Welcome to Uki. I am Aruntha

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');

//create a file named mynewfile3.txt:
fs.writeFile('ukinode.txt', 'It is a full scholarship based Accelerator program for Coding in Jaffna', function (err) {
  if (err) throw err;
  console.log('Saved!');
});
```



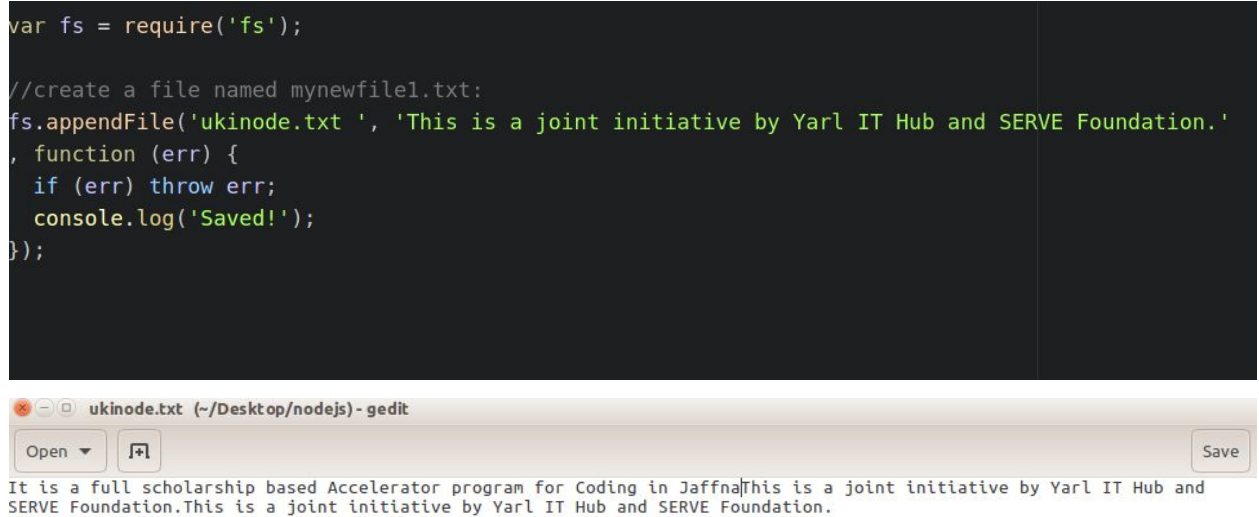
3.2 Serve that file to the client (Read File) over your server

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

http.createServer(function (req, res) {
  fs.readFile('ukinode.txt', function(err, data) {
    res.writeHead(200, {'Content-Type': 'text/html'});
    res.write(data);
    res.end();
  });
}).listen(8080);
```



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



3.4 Rename the file as ukinodejsexercise1.txt



```

[nodemon] restarting due to changes...
[nodemon] starting `node node6.js`
File Renamed!
[nodemon] clean exit - waiting for changes before restart
[nodemon] restarting due to changes...
[nodemon] starting `node node6.js`
[nodemon] restarting due to changes...
[nodemon] restarting due to changes...
[nodemon] restarting due to changes...
[nodemon] restarting due to changes...
[nodemon] restarting due to changes...
[nodemon] starting `node node6.js`
[nodemon] restarting due to changes...
[nodemon] starting `node node6.js`
File Renamed!
[nodemon] clean exit - waiting for changes before restart
ukistul3@ukipc13:~/Desktop/nodejs$

```

3.5 Delete the file you created

```

var fs = require('fs');

//Delete the file mynewfile2.txt:
fs.unlink('ukinodejsexercisel.txt', function (err) {
  if (err) throw err;
  console.log('File deleted!');
});

```

```

ukistul3@ukipc13:~/Desktop/nodejs$ nodemon node7.js
[nodemon] 1.19.1
[nodemon] to restart at any time, enter `rs`
[nodemon] watching: *.*
[nodemon] starting `node node7.js`
File deleted!
[nodemon] clean exit - waiting for changes before restart

```

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


```

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(req.url);
    res.write(data);
    return res.end();
  });
}).listen(8080);

```

/head.html

you have got head

/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.

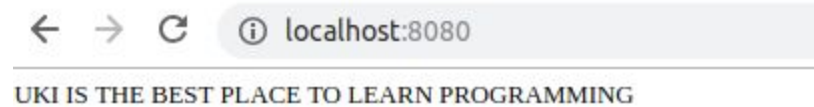
```

^Cukistul3@ukipcl3:~/Desktop/nodejs$ sudo npm install upper-case
[sudo] password for ukistul3:
/home/ukistul3
└─ upper-case@1.1.3

npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@^1.0.0 (node_modules/chokidar/node_modules/fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@1.2.9: wanted {"os":"darwin","arch":"any"} (current: {"os":"linux","arch":"x64"})
npm WARN enoent ENOENT: no such file or directory, open '/home/ukistul3/package.json'
npm WARN ajv-keywords@2.1.0 requires a peer of ajv@>=5.0.0 but none was installed.
npm WARN ukistul3 No description
npm WARN ukistul3 No repository field.
npm WARN ukistul3 No README data
npm WARN ukistul3 No license field.
ukistul3@ukipcl3:~/Desktop/nodejs$

```

```
var http = require('http');
var uc = require('upper-case');
http.createServer(function (req, res) {
  res.writeHead(200, {'Content-Type': 'text/html'});
  /*Use our upper-case module to upper case a string:*/
  res.write(uc("Uki is the best place to learn programming"));
  res.end();
}).listen(8080);
```



6. Create an event handler function that will say "I bark when I see strangers !" when a "bark" event is fired.

```

var events = require('events');
var EventEmitter = new events.EventEmitter();

//Create an event handler:
var myEventHandler = function () {
  console.log('I bark when I see strangers !');
}

//Assign the eventhandler to an event:
eventEmitter.on('bark', myEventHandler);

//Fire the 'scream' event:
eventEmitter.emit('bark');

```

```

^Cukistul3@ukipcl3:~/Desktop/nodejs$ nodemon node10.js
[nodemon] 1.19.1
[nodemon] to restart at any time, enter `rs`
[nodemon] watching: *.*
[nodemon] starting `node node10.js`
I bark when I see strangers !
[nodemon] clean exit - waiting for changes before restart

```

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

```

^Cukistul3@ukipcl3:~/Desktop/nodejs$ sudo npm install formidable
[sudo] password for ukistul3:
/home/ukistul3
└─┬─ superagent@3.6.0
   └─ formidable@1.2.1

npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@^1.0.0 (node_modules/chokidar/node_modules/fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@1.2.9: wanted {"os":"darwin","arch":"any"} (current: {"os":"linux","arch":"x64"})
npm WARN enoent ENOENT: no such file or directory, open '/home/ukistul3/package.json'
npm WARN ajv-keywords@2.1.0 requires a peer of ajv@>=5.0.0 but none was installed.
npm WARN ukistul3 No description
npm WARN ukistul3 No repository field.
npm WARN ukistul3 No README data
npm WARN ukistul3 No license field.
ukistul3@ukipcl3:~/Desktop/nodejs$

```

7.1 Save that uploaded file into your Documents directory.

```
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);
```

Choose File ukinode.txt
Submit

```
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);
```

File uploaded


```

var http = require('http');
var formidable = require('formidable');
var fs = require('fs');

http.createServer(function (req, res) {
  if (req.url == '/fileupload') {
    var form = new formidable.IncomingForm();
    form.parse(req, function (err, fields, files) {
      var oldpath = files.fileupload.path;
      var newpath = '/home/ukistu13/Desktop/Uki/' + files.fileupload.name;
      fs.rename(oldpath, newpath, function (err) {
        if (err) throw err;
        res.write('File uploaded and moved!');
        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="fileupload"><br>');
    res.write('<input type="submit">');
    res.write('</form>');
    return res.end();
  }
}).listen(8080);

```

LF UTF-8 Babe

File uploaded and moved!

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 !”

```

^Cukistu13@ukipc13:~/Desktop/nodejs$ sudo npm install nodemailer
[sudo] password for ukistu13:
/home/ukistu13
└─ nodemailer@6.2.1

npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@^1.0.0 (node_modules/chokidar/node_modules/fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@1.2.9: wanted {"os":"darwin","arch":"any"} (current: {"os":"linux","arch":"x64"})
npm WARN enoent ENOENT: no such file or directory, open '/home/ukistu13/package.json'
npm WARN ajv-keywords@2.1.0 requires a peer of ajv@>=5.0.0 but none was installed.
npm WARN ukistu13 No description
npm WARN ukistu13 No repository field.
npm WARN ukistu13 No README data
npm WARN ukistu13 No license field.
ukistu13@ukipc13:~/Desktop/nodejs$

```

```

ukistu13@ukipc13:~/Desktop/nodejs$ nodemon node16.js
[nodemon] 1.19.1
[nodemon] to restart at any time, enter `rs`
[nodemon] watching: *.*
[nodemon] starting `node node16.js`
{ Error: queryA EREFUSED smtp.gmail.com
  at errnoException (dns.js:28:10)
  at QueryReqWrap.onresolve [as oncomplete] (dns.js:216:19)
  code: 'EDNS',
  errno: 'EREFUSED',
  syscall: 'queryA',
  hostname: 'smtp.gmail.com',
  command: 'CONN' }
[nodemon] clean exit - waiting for changes before restart

```

8.1 Now instead of text send a basic html formatted mail.

```
var nodemailer = require('nodemailer');
var transporter = nodemailer.createTransport({
  service: 'gmail',
  auth: {
    user: 'aaruntha05@gmail.com',
    pass: 'sssss'
  }
});
var mailOptions = {
  from: 'aaruntha05@gmail.com',
  to: 'myfriend@yahoo.com',
  subject: 'Sending Email using Node.js',
  html: '<h1>Welcome</h1><p>That was easy!</p>'
}
transporter.sendMail(mailOptions, function(error, info){
  if (error) {
    console.log(error);
  } else {
    console.log('Email sent: ' + info.response);
  }
});
```