Node.js for Beginners

Lab Exercise 2
Answer Key

1. Modify the static web server in chapter 2 to cache files so that it doesn't need to read the file from disk on each request.

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

var server = http.createServer();

//NEW CODE!
var cache = {};

//genericSend(404,"not found");
function genericSend(code,message,response) {
    response.writeHead(code,{"Content-Type":"text/plain"});
    response.end(message);
};

server.on('request',function(request,response) {
    //possible response codes
    //404
    //500
    //200 OK

    var urlParams = url.parse(request.url),
        // pathname: /index.html ==> index.html
        filename = path.join('.',urlParams.pathname);
```

```javascript
        //NEW CODE
        if(cache[filename]) {
            response.writeHead(200,{'Content-
Type':cache[filename]['Content-Type']});
            response.write(cache[filename].file,'binary');
            response.end();
        } else {
            path.exists(filename,function(exists) {
                if(!exists)
                    return genericSend(404,'not
found',response);


fs.readFile(filename,'binary',function(err,file) {
                    if(err)
                        return genericSend(500,'internal
server error',response);

                    var type = mime.lookup(filename);
                    response.writeHead(200,{'Content-
Type':type});

                    response.write(file,'binary');
                    response.end();
                    //NEW CODE
                    cache[filename] = {
                        'Content-Type':type,
                        file:file
                    }
                });
            });
        }
    });

    server.listen(9000);
```

2. Make an express-based web server that serves a random quote in plain text. The quotes should be in an array.

```javascript
    var app = require('express')();

    var quotes = ["some great saying","something
wonderful"];

    app.get("*",function(req,res) {
      res.send(quotes[Math.round(Math.random() *
(quotes.length-1))]);
    });

    app.listen(9000);
```

3. Write a server that uses an ejs view to generate an HTML page that turns an array into an HTML unordered list.

First, install express and ejs with npm app.js

```javascript
var app = require('express')();

    app.set('view engine', 'ejs');

    random = ['a','b','c'];

    app.get("*",function(req,res) {
      res.render('random',{items:random});
    });

    app.listen(9000);
views/random.ejs
    <ul>
    <% items.forEach(function(item) { %>
        <li><%= item %></li>
    <% }); %>
    </ul>
```