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# Professional Art

ATA/NodeJS/05-Professional Art

Part 5 – Professional Art



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## Putting it together...

- Directory and file structure

```
> node_modules
▼ public
  css
  images
  scripts
  routes
▼ views
  pages
  partials
```

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## ejsExample.js

### Importing requires packages

```
var express = require('express');
var app = express();
var http = require('http');
var path = require('path');

var bodyParser = require('body-parser');

//var routes = require('./routes');
var members = require('./routes/members');

var mysql = require('mysql');
var connection = require('express-
myconnection');
```



## ejsExample.js

### Defining database connectivity parameters

```
var dbOptions = {
  host: 'database hosting machine hostname or IP',
  user: 'database username',
  password: 'database password',
  port: 3306,
  database: 'database name'
};
```



## ejsExample.js

### Set the express environment

```
// all environments
app.set('port', process.env.PORT || 1337);
app.set('views', path.join(__dirname, 'views'));

// set view engine to ejs
app.set('view engine', 'ejs');
```



## ejsExample.js

### Defining pre-routing process & validation - 1

```
//Creating Router() object
var router = express.Router();

// Router middleware, mentioned it before defining routes.
router.use("/", function(req,res,next) {
  console.log("/") + req.method;
  next();
});

router.use("/home", function(req,res,next) {
  console.log("/home/" + req.method);
  next();
});

router.use("/about", function(req,res,next) {
  console.log("/about/" + req.method);
  next();
});
```



## ejsExample.js

### Defining pre-routing process & validation - 2

```
router.use("/sitemap", function(req,res,next) {
  console.log("/sitemap/" + req.method);
  next();
});

// This middle-ware will get the id param
// check if its 0 else go to next router.
router.use("/user/:id", function(req,res,next){
  if(req.params.id == 0) {
    res.json({"message" : "You must pass ID other than 0"});
  }
  else next();
});
```



## ejsExample.js

### Define the route - 1

```
// Provide all routes here
router.get("/", function(req, res){
  // send back json data
  res.json({"message" : "Hello World"});
});

router.get('/home', function(req, res) {
  var product = [
    { name: 'Logitech UE Boom 2', description: 'Wireless & Waterproof Speaker' },
    { name: 'Maxtill SB-100', description: 'Powerful Soundbar Speaker' },
    { name: 'UNIC Wifi Projector', description: 'Wireless & Portable For Home Theatre' },
    { name: 'GoPro Hero 5 Black', description: '9PC Bundle Pack + Warranty' },
    { name: 'DOORAA', description: 'The Ultimate Full HD Selfie Camera' },
    { name: 'ONE PLUS 3', description: '64GB 5.5" QUAD CORE + Warranty' }
  ];
  var tagline = "UNBEATABLE! KNOCK-OUT DIGITAL items";

  res.render('pages/index', {
    page : req.url,
    product: product,
    tagline: tagline
  });

  //res.render('pages/index');
});
```



## ejsExample.js

### Define the route - 2

```
router.get('/about', function(req, res){
  res.render('pages/about', {
    page : req.url
  });
});

router.get('/sitemap', function(req, res){
  res.render('pages/sitemap', {
    page : req.url
  });
});

router.get("/user/:id", function(req, res){
  res.json({"message" : "Hello " + req.params.id});
});
```



## ejsExample.js

### Define the route - 3

```
router.get('/members', members.list);
router.get('/members/add', members.add);
router.post('/members/add', members.save);
router.get('/members/delete/:id', members.delete_member);
router.get('/members/edit/:id', members.edit);
router.post('/members/edit/:id', members.save_edit);
```



## ejsExample.js

### Define express capabilities and objects

```
// parse application/x-www-form-urlencoded
app.use(bodyParser.urlencoded({ extended: false }));

// parse application/json
app.use(bodyParser.json());

app.use(express.static(path.join(__dirname, 'public')));

// connection peer, register as middleware type : single, pool and request
app.use(connection(mysql, {
  host: 'localhost',
  user: 'root',
  password : 'darryl1975',
  port : 3306, //port mysql
  database:'test'
}, 'pool'));

// Tell express to use this router with '/' before.
// You can put just '/' if you don't want any sub-path before routes.
app.use('/', router);
```

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## ejsExample.js

### Handling routing exceptions

```
app.use(function(err, req, res, next) {
  console.log(err.stack);
  res.status(500).send({"Error" : err.stack});
});

// last middleware - handle 404 error
app.use("*", function(req, res){
  res.status(404).send('404');
});
```

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## ejsExample.js

### Serving user with http server creation

```
// listen on this port
// viewed at http://localhost:1337
/*
app.listen(1337, function() {
    console.log("Running at Port 1337");
});
*/

http.createServer(app).listen(app.get('port'), function(){
    console.log('Express server listening on port ' +
app.get('port'));
});
```



## package.json

```
{
  "name": "06",
  "version": "1.0.0",
  "description": "simple HTML website using nodeJS",
  "main": "ejsExample03.js",
  "scripts": {
    "test": "echo \"Error: no test specified\" && exit 1",
    "start": "nodemon ejsExample03.js"
  },
  "keywords": [
    "html",
    "nodeJS",
    "expressJS",
    "MVC"
  ],
  "author": "Darryl Ng",
  "license": "ISC",
  "dependencies": {
    "express-myconnection": "^1.0.4"
  }
}
```



## members.js

### Create operations - GET

```
exports.add = function(req, res){
  res.render('pages/add_member',{page_title:"Add member - Node.js"});
};
```



## members.js

### Create operations - POST

```
exports.save = function(req,res){
  var input = JSON.parse(JSON.stringify(req.body));
  console.log(input);

  req.getConnection(function (err, connection) {
    if (err)
      console.log("Error establishing connection: %s", err);

    var data = {
      surname      : input.surname,
      fname        : input.fname,
      secondname    : input.secondname
    };

    var query = connection.query("INSERT INTO member SET ? ",data, function(err, rows)
    {
      if (err)
        console.log("Error inserting : %s ",err );
      res.redirect('/about');
    });
  });
};
```





## members.js

### Read operations

```

/*
 * GET members listing.
 */
exports.list = function(req, res){

  var pg = req.url;

  req.getConnection(function(err,connection){

    var query = connection.query('SELECT * FROM member',function(err,rows)
    {
      if(err)
        console.log("Error Selecting : %s ",err );

      res.render('pages/members',{page: pg, page_title:"members - Node.js", data:rows});
    });
  });
};

```



## members.js

### Update operations - GET

```

exports.edit = function(req, res){

  var id = req.params.id;

  req.getConnection(function(err,connection){

    var query = connection.query('SELECT * FROM member WHERE mid =
?', [id],function(err,rows)
    {
      if(err)
        console.log("Error Selecting : %s ",err );

      res.render('pages/edit_member',{page_title:"Edit member -
Node.js",data:rows});
    });
  });
};

```



## members.js

### Update operations - POST

```
exports.save_edit = function(req,res){

    var input = JSON.parse(JSON.stringify(req.body));
    var id = req.params.id;

    req.getConnection(function (err, connection) {

        var data = {
            surname    : input.surname,
            fname      : input.fname,
            secondname  : input.secondname
        };

        connection.query("UPDATE member set ? WHERE mid = ? ",[data,id], function(err, rows)
        {
            if (err)
                console.log("Error Updating : %s ",err );

            res.redirect('/about');
        });
    });
};
```

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## members.js

### Delete operations - POST

```
exports.delete_member = function(req,res){

    var id = req.params.id;

    req.getConnection(function (err, connection) {

        connection.query("DELETE FROM member WHERE mid = ? ",[id], function(err, rows)
        {
            if(err)
                console.log("Error deleting : %s ",err );

            res.redirect('/about');
        });
    });
};
```

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## Partial Pages - head.ejs

```
<!-- views/partials/head.ejs -->

<meta charset="UTF-8">
<title>ISS</title>

<script src="https://ajax.googleapis.com/ajax/libs/jquery/1.11.2/jquery.min.js"></script>
<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.1/css/bootstrap.min.css">
<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.1/css/bootstrap-theme.min.css">
<script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.1/js/bootstrap.min.js"></script>

<script type="text/javascript" src="../../scripts/all.js"></script>

<!-- CSS (load bootstrap from a CDN)
<link rel="stylesheet" href="//maxcdn.bootstrapcdn.com/bootstrap/3.2.0/css/bootstrap.min.css">
<style>
    body { padding-top:50px; }
</style> -->
```



## Partial Pages - header.ejs

```
<!-- views/partials/header.ejs -->

<nav class="navbar navbar-inverse navbar-static-top">
  <div class="container">
    <a class="navbar-brand" href="/">Simple Website</a>
    <ul class="nav navbar-nav">
      <% if (page == '/home') { %>
        <li class="active">
          <% } else { %>
            <li>
              <% } %>
              <a href="/home">Home</a>
            </li>
          <% if (page == '/members') { %>
            <li class="active">
              <% } else { %>
                <li>
                  <% } %>
                  <a href="/members">Members</a>
                </li>
              <% if (page == '/about') { %>
                <li class="active">
                  <% } else { %>
                    <li>
                      <% } %>
                      <a href="/about">About</a>
                    </li>
                  <% if (page == '/sitemap') { %>
                    <li class="active">
                      <% } else { %>
                        <li>
                          <% } %>
                          <a href="/sitemap">Sitemap</a>
                        </li>
                      </ul>
                    </div>
                  </nav>
```



## Partial Pages - footer.ejs

```
<!-- views/partials/footer.ejs -->

<p class="text-center text-muted">© Copyright 2017 ISS</p>
```



## Home page index.ejs

```
<html>
<head>
  <title>Simple Node - Home</title>
  <%= include ../partials/head %>
</head>
<body>

  <div style="margin:100px;">
    <header>
      <%= include ../partials/header %>
    </header>

    <div class="jumbotron" style="padding:40px;">
      <h2>Index</h2>
      <p>Hi! Welcome to the first HTML site created using NodeJS, a simple website hosted using nodeJS.</p>

      <p><%= tagline %></p>
      <br>
      <h2>Our Product</h2>
      <ul>
        <%= product.forEach(function(prod) { %>
          <li><%= prod.name %> - <%= prod.description %></li>
        <%= }); %>
      </ul>
      <p><a class="btn btn-primary btn-lg" href="#" role="button">Learn more</a></p>
    </div>
  </div>

  <footer>
    <%= include ../partials/footer %>
  </footer>
</body>
</html>
```



# Home page about.ejs

```
<html>
<head>
  <title>Simple Node - Home</title>
  <% include ../partials/head %>
</head>
<body>

  <div style="margin:100px;">
    <header>
      <% include ../partials/header %>
    </header>
    <div class="jumbotron" style="padding:40px;">
      <h2>About</h2>
      <p>Hi! Welcome to the first HTML site created using NodeJS, a simple website hosted using nodeJS.</p>
      <p><a class="btn btn-primary btn-lg" href="#" role="button">Learn more</a></p>
    </div>
  </div>
  <footer>
    <% include ../partials/footer %>
  </footer>
</body>
</html>
```



# Home page sitemap.ejs

```
<html>
<head>
  <title>Simple Node - Home</title>
  <% include ../partials/head %>
</head>
<body>

  <div style="margin:100px;">
    <header>
      <% include ../partials/header %>
    </header>
    <div class="jumbotron" style="padding:40px;">
      <h2>Sitemap</h2>
      <p>Hi! Welcome to the first HTML site created using NodeJS, a simple website hosted using nodeJS.</p>
      <p><a class="btn btn-primary btn-lg" href="#" role="button">Learn more</a></p>
    </div>
  </div>
  <footer>
    <% include ../partials/footer %>
  </footer>
</body>
</html>
```



## CRUD pages

- members.ejs
- add\_member.ejs
- edit\_member.ejs

# Demo

New Tech Solving Big Problems



## Additional Reading References

- <https://code.ciphertrick.com/2015/02/25/get-post-requests-in-node-js-using-express-4/>
- <https://codequs.com/p/HJBfJxMt/restful-api-with-node-js-and-express-4/>
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tm](https://www.tutorialspoint.com/nodejs/nodejs_scaling_application.htm)