Intro to Web Server

Module 3 Week 6

Notes Repo: https://github.com/C-Shi/lhl-flex-lecture

Lecture Style Update

Complicated Code

Third Party Library

Optional Stretch Topic

Video Recording Available

Learning Objectives

Intro to Web Server

Express framework
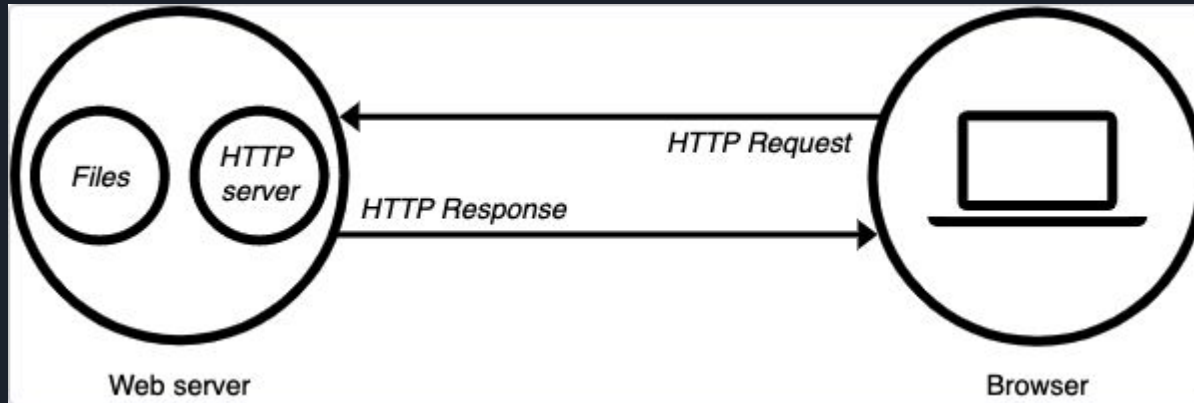
Middleware

Template Engine

Stretch Topic

Web Server

Control how web users access hosted file

Software that understands URLs and HTTP

Act as a gateman between client and the resources

Express.js

A *lightweight*, node.js web framework

The main use of *Express* is to simplify the creation of route handlers

Easy Configuration:

1.   Create an express instance
2.   Define route and handler
3.   Listen to a port

```javascript
// require express
const express = require('express');
const app = express();

// define handler
app.METHOD(PATH, HANDLER CALLBACK)

// start server
app.listen(port, () => {
  console.log(`Example app listening on port ${port}`);
})
```

Middleware

Middleware is functions that run between Request and Response

Express itself provide very minimum amount of functionality, middleware make it powerful

Global middleware and *route specific* middleware

Middleware package and custom middleware

Using middleware

Express is a routing and middleware web framework that has minimal functionality of its own: An Express application is essentially a series of middleware function calls.

Middleware functions are functions that have access to the request object (`req`), the response object (`res`), and the next middleware function in the application's request-response cycle. The next middleware function is commonly denoted by a variable named `next`.

Template Engine

A processor to combine view template and data model

Dynamically generate HTML

Allow partials for reusable HTML

EJS (Embedded JavaScript)

```
<!-- Include some file from ejs template file -->
<%- include('partials/header') %>

<!-- Logical JavaScript, no output -->
<% if(a > b) { %>
  <div>a is greater than b</div>
<% >} %>

<!-- output the value of a variable/expression -->
<div>My name is <%= name %></div>
```

Stretch Topic – Learn at your will

How to send different type of response in Express

- Sending a pure text message
- Sending a JSON message
- Sending a static, hard coded HTML file
- Sending a dynamic HTML file using template engine
- Sending a redirect to a different route
- Sending a download

Recording can be accessed at https://vimeo.com/702245540/ee477277ba