COMP 9783 Front-end Development

Lab-1-4 - Express.js Static Lab. (4% of the course mark)

Name:

Student Number:

A hands-on workshop focusing on utilizing Express.js framework to efficiently serve static files such as HTML, CSS, and JavaScript. Participants learn to leverage Express's built-in middleware for static file serving, explore best practices for organizing static assets, and gain practical insights into optimizing performance for web applications.

Lab objectives:

1. Mastering the implementation of Express middleware for static file serving.
2. Understanding best practices for organizing and managing static assets within Express.js projects.
3. Optimizing performance strategies for web applications through hands-on exercises and real-world examples.

Create an Express.js app:

1. On **VSCode**, **create** a **folder** named **Express-Static-App**.
2. Open the **terminal** and change the directory to **Express-Static-App**.
1. Initialize the app by performing the following tasks:
3. **Type npm init -y** and **press enter**.

Note: npm init -y is a quick shortcut to initialize the package.json file. It will initialize the app with default values.

4. Type **npm install express** and **press enter**.

5. Create a file named **index.js** and enter the following code:

```
const express = require("express");
const app = express();
const port = 3000;
const APP_NAME = "Express-Static-App";


app.use(express.static("public"));


app.get("/", (req, res) => {
  res.sendFile(`${__dirname}/public/index.html`);
});


app.listen(port, () => {
  console.log(`${APP_NAME} listening on port ${port}`);
});
```

6. Save the changes.

7. Create the following directory structure.

   a. **Express-Static-App/public**

   b. **Express-Static-App/public/css**

   c. **Express-Static-App/public/images**

   d. **Express-Static-App/public/js**

8. Inside the public folder, create a file named: **index.html**. Create an HTML app that satisfies the following conditions:

   a. The HTML app must use a **css file** and place it inside

      Express-Static-App/public/css.

   b. The HTML app must use an **image file** and place it inside

      Express-Static-App/public/images.

   c. The HTML app must use a **js file** and place it inside **Express-Static-App/public/js**.

9. On the terminal enter the **node index.js** and **press enter**.

10. Open your browser and enter the url: **http://localhost:3000/** It should display the HTML file that was saved inside the public folder.

Submission:

1. Create a new folder named **app** and copy the following from **Express-Static-App**:

   a. public folder

   b. index.js

   c. package-lock.json

   d. package.json

2. Create a **zip file** of the **app folder**.

3. Submit the **zip file** to **GBC - D2L**.