



Collage of Electrical and Mechanical Engineering

Department of Software Engineering

Internet Programming II Group

Assignment

Question a

Section C

Group Members	ID
1. Mahlet Haile.....	ETS0428/12
2. Mahlet Samuel.....	ETS0430/12
3. Melaku Abebe.....	ETS0446/12
4. Mesekir Getachew.....	ETS0452/12
5. Mulualem Asfaw.....	ETS0494/12
6. Nahom Mulugeta.....	ETS0498/12

Submitted to: Instructor Chere Lemma

Question: Identify and explain all the modules (local, core, third party) used in DEMO APP implementation.

1. Local modules

A. **check_authentication.js:** this module have two functions, the first one is to check id the session userID is set to find whether the user is already logged in. If the user is logged in then the session userID will be set and can perform the next instructions or explore the web but if not the session will not be set. Thw second one do the same thing as the first one but this one checks if the user is not logged in.

B. **fileUpload.js:** in this file there are two module the first one give us the capability to upload images and the second one will give us the capability to export files to csvfiles.

C. **Hashing.js:** in this module there are two functionalities to encrypt a password and to match the encrypted password from the database to the one the user put in the log in page.

D. **Image_upload.js:** used for uploading files.

E. **passportController.j:** used for authentication whether the user is register or not and serialized and de-serialize user information.

F. **sendEmail.js:** used for sending email with a unique token when a user ask for password reset.

G. **Validation_rules.js:** used for sanitation and validation of user input during registration , login, password reset and course details.

H. **validation-rules@alternateexample.js:** alternative method for the validation_rules modules.

2. Core Modules

A. **fs :** file system module allows us to work with the file systems on our computer, like reading, updating, deleting opening ect. files.

B. **path:** this module provides utilities for working with file directory paths.

3. Third party Modules

A. **express:**

Express is a node js web application framework that provides broad features for building web and mobile applications. It is used to build a single page, multipage, and

hybrid web application. It's a layer built on the top of the Node.js that helps manage servers and routes.

Why Express JS?

- Express was created to make APIs and web applications with ease,
- It saves a lot of coding time almost by half and still makes web and
- mobile applications are efficient.
- Another reason for using express is that it is written in javascript as javascript is an easy language even if you don't have a previous
- knowledge of any language. Express lets so many new developers enter the field of web development.

The reason behind creating an express framework for node.js is:

- Time-efficient
- Fast
- Economical
- Easy to learn
- Asynchronous

B. **express-session**: an HTTP server-side framework used to create and manage a session middleware.

C. **express-validator**: is a set of Express.js middleware that wraps `validator.js`, a library that provides validator and sanitizer functions. Simply said, Express Validator is an Express middleware library that you can incorporate in your apps for server-side data validation.

D. **connect-flash**: is a library which allows you to flash messages whenever you are redirected to another webpage. Typically, when you log in to a website, a message would 'flash' on top of your screen indicating your success or failure in logging in.

E. **multer**: is a node.js middleware for handling multipart/form-data, which is primarily used for uploading files.

F. **bcryptjs**: To avoid the sensitive data being visible from anyone, Node.js uses "bcryptjs". This module enables storing of passwords as hashed passwords instead of plaintext.

G. **passport:** is a popular, modular authentication middleware for Node.js applications. With it, authentication can be easily integrated into any Node- and Express-based app. The Passport library provides more than 500 authentication mechanisms, including OAuth, JWT, and simple username and password based authentication.

H. **passport-local:** This module lets you authenticate using a username and password in your Node.js applications. By plugging into Passport, local authentication can be easily and unobtrusively integrated into any application or framework that supports Connect-style middleware, including Express.

I. **nodemailer:** is a Node.js module that allows you to send emails from your server with ease.

J. **rand-token:** Generate random tokens from your choice of randomness.

K. **csvtojson:** module is a comprehensive nodejs csv parser to convert csv to json or column arrays.

L. **json2csv:** Converts json into csv with column titles and proper line endings.

M. **mysql:** Node.js can be used in database applications like mysql this module provide a link between the node and mysql database form manipulating.

N. **dotenv:** is a lightweight npm package that automatically loads environment variables from a .env file into the process.env object