**Paired Assignment**

1. **Learning Outcomes**

Put all what we have learned together

1. **Organisation / More Info**

* Paired assignment

1. **Submission**

This paired assignment is worth 25%.

The deadline for submission is Tue Dec 1st, 2020 @23:59 through Brightspace. Details to follow.

The work and submission workflow is as follows:

* Create a sub-folder for your problem
* Put your solution for each problem into it’s respective folder.
* When you are finished developing your worksheet solution, compress and zip all problems into one zip file. Name this ***<student1-name-id>***-***< student2-name-id>***-lab -5.zip
* ***<student-id>*** is something like C12345678

Upload to Paired Assignment / Paired Assignment – Upload

1. **Task**

Develop a web application that interacts with a MongoDB database using the MERN stack we have been covering in this module. The application has to implement the 4 CRUD operations (Create/Read/Update/Delete).

An example is a book library application, with a pre-populated DB, that allows users to:

* Register: create, read, update or delete a profile with personal information, including a profile picture and password management (change, recovery)
* Authentication: Log in and log out
* Search: for books that match certain criteria (e.g. publication year, title or author containing a word)
* View: View search results
* Filter: The search results
* Add books to a personal area (e.g. “My Books”)
* Only logged in users can add books to the personal area
* Any user can search for books and see the results.
* Include a README.md with comprehensive installation instructions for setting up and running the project.

You are free to choose the exact application, but consider the required components in the marking scheme below.

Students are not allowed to share their own code outside their group. Any external code snippets, libraries or frameworks used must be properly acknowledged (for example with comments in the code). Remember the policy on plagiarism – facilitators and perpetrators, both get zero.

Submit your project in a compressed ZIP folder via Brightspace by **23:59 on 1/12/2020**.

Demos will take place the day or week after during our normal schedule.

Do not include the node\_modules folder, an SQL dump of the database and a readme.txt with configuration and deployment information.

**I WILL SCHEDULE A VIDEO FOR ALL PAIRS ON - 2ND or 9th**

**LATE SUBMISSIONS NOT ACCEPTED**

**Grading Matrix below:**

**Functionality (70):**

Authentication and Personal vs Public areas – 15 marks  
CRUD operations with MongoDB including profile management – 20 marks

Advanced Search and Filter mechanism – 5 marks  
Validation of inputs (from forms) – 5 marks  
Upload mechanism (for files) – 5 marks  
Asynchronous communication (AJAX, with DB, JSON) – 5 marks

I should be able to run this from my machine with minimal setup, include scripts if need be ( – 15 marks )

*No node\_modules uploaded!*

**Usability/User Experience (10):**

Communication with the User (error messages, etc.) – 5 marks

Bootstrap (for visuals) – 5 marks

**Code Quality/Security (10):**

MVC design pattern and DRY where possible – 10 marks

**Documentation (10):**

Comprehensive instructions for running the application locally (README.md) – 10 marks

I should be able to run this all locally from my machine with minimal setup.

Please contact the lecturer in case any aspect of this assignment is not clear to you. Have fun!