DND Course Project

Deadline
The deadline for the course project can be seen on itslearning. The project is initially handed in on itslearning as a link to your project repository on GitHub. At the time of deadline, the project must be fully updated and finalized. Additional files, including video presentations, must be handed in at a later date to WiseFlow, during the ordinary exam period, as described under deliverables.

Evaluation
The project is assessed based on

- The delivered software
- Documentation of technical process via developer blog
- Group presentation (video)
- Individual presentation (video)

Groups
The project must be carried out in groups of 2-4 students.

About the Project
The project consists of the source code of your project (hosted on Github), as well as a set of blog posts hosted as markdown files on the same Github repository.

You have full freedom in the choice of domain, i.e. what problem your software will solve, but your proposal must be approved by your supervisors.

Your GitHub repository must contain a README.md in the root of the repository. This file must contain the name & student number of each group member as well as a mapping to their GitHub username.

GitHub commit messages are used to determine the contributions of each team member. It is advised to attribute co-authors if multiple students have ownership of the same commit. If the commit messages in any way do not reflect the correct distribution of work, this must be addressed in a separate .md file linked to from README.md, detailing the correct contributions for each team member.

Expected workload is around 70 hours per student.

Technical Requirements:

- Your system must contain a RESTful webservice (it does not need to account for HATEOAS)
- Your system must contain a user facing web application as a frontend, using Blazor
- The web service and web application must be two distinct programs, communicating via HTTP

- Your system must contain login functionality which handles multiple different actors
- Your system must store user data using an Object Relational Mapper and SQLite

Developer Blog
The development process must be documented via a series of six blog posts. Each blog post must be included as its own .md file and linked to from README.md.

Each blog post must contain at least 2000 characters (including spaces, but excluding figures and code snippets).

#1 Project Formulation & Initial Requirements:
- A description of the project domain and why you chose it.
- A list of requirements (formulated as user stories).

#2 Web Service Design & Implementation:
- Describe how you worked with your RESTful web API. Provide code examples.
- Give an overview of your web API endpoints.
- Describe how you are currently using file storage to store data. Provide code examples.

#3 Web Application:
- Describe how your key requirements are implemented in your web application. Provide code examples.
- Give an overview of the pages in your web application.
- Describe how your frontend connects to your web service. Provide code examples.

#4 User Management:
- Describe what users exist in your system and how you have implemented log-in functionality. Provide code examples.
- Describe how access to resources are handled between different actors. Provide code examples.

#5 Data Access:
- Describe how the introduction of an ORM changes how you work with data in your system.
- Describe how using LINQ is different to the traditional SQL approach. Provide code examples.

#6 Project Conclusion & Demonstration:
- Provide a final development update, detailing what has been worked on to finalize the project.
- Give a summary of your project outcome.
- Update your requirements list to indicate which requirements have been implemented.
- Include a link to an online video demonstration of the application in use (~2min).

Deliverables
When handing in the project on WiseFlow, include a link to your public Github repository and a .zip of the entire git repository. Furthermore, a group video presentation, as well as an individual video presentation per group member, must be included in the hand-in:

Group presentation:
You must prepare and record a 10 minute presentation of your project. It is entirely up to you how you do this. It could be a recording of you doing the presentation or it could simply be you speaking on top of a presentation. But please make sure that it is done properly, and do spend a bit of time on editing, etc.. Your presentation should include the following elements:

- Present the implementation of your project. Include interesting details.
- Explain how the key requirements of your project have been implemented.
- Highlight any challenges you may have encountered and how you overcame them.
- If any specific process was applied to your work, feel free to include this.

Individual reflections:
Each student must in addition to the group presentation prepare and record a 5 minute presentation. The presentation should include, but is not restricted to including, the following elements:

- Reflect upon your own contribution to the project as well as the general outcome.
- Describe how .NET technologies aided you in developing the project.
- Identify specific learning outcomes for future projects where .NET technologies are relevant.
- Evaluate the relevance of using .NET technologies when solving similar problems.