**Software Practicum II Update : Week 1**

EduHubConnect is a proposed web-based Online Learning Management System (LMS) designed to centralize and enhance online learning experiences for educators and students. The system includes a user interface for seamless interaction, a server for core functionality, and a database for information storage. By employing a three-tier architecture, EduHubConnect aims to ensure scalability, maintainability, and separation of concerns. The initial focus will be on universities and higher learning institutions, offering features such as user and course management, discussion forums, and adherence to best software engineering practices. M

**Proposed Changes**

* General optimization of the codebase including minimizing database queries, reducing calculations and loops. And introducing a mechanism to cache compiled bytecode.
* Leveraging caching headers such as ‘expires’ to cache static files to reduce load times on file downloads
* Minimizing client-side processing (handling more on the server-side) for file uploads to reduce unnecessary server load by rejecting invalid uploads early in the process.
* Configuring the web server to handle file uploads efficiently by adjusting settings such as upload\_max\_filesize, post\_max\_size, and max\_execution\_time.
* Optimizing the user interface to prioritize loading critical elements first, such as the chat input field or forum thread titles.

**Software Engineering Topics of Interest**

1. Topics I would like to demo to peers

Designing RESTful APIs and API Documentation

1. Topics to have demonstrated:

Microservices architecture and containerization (e.g., Docker, Kubernetes)

Serverless computing and functions-as-a-Service (FaaS)