



**First semester 2023/2024**

**Advanced topics in software development**

**Group project: Final delivery**

**Method of assessment**

**ETA: 27 Dec midnight.**

**Total marks: 100**

**Weight: 25%**

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The main objective in the group project is to apply all principles, methodologies, rules and best practices in software development you learned in this course. In the final delivery I expect you to show me a well-functioning application. The project evaluation will be based on the following criteria.

**Functional requirements (30 points)** Your application should contain the all required functional features in this project

1. Data Exporting- **20 points**
  - a. Export the data and download it directly. **10 points**
  - b. Upload the data to the specified file storage service **5 points**
  - c. Convert a zip file containing PDF files. **5 points**
2. Data Deletion - **10 points**
  - a. Soft delete
  - b. Hard delete

**Non functional requirements (30 points)**

1. System scalability - **10 points**
2. System accountability - **3 points**
3. System flexibility - **10 points**
4. System Availability - **5 points**
5. System performance - **2 points**

**Clean code and Code conversion (5 points)**

You should apply code clean and code conversion rules and principles in your application.

**Design patterns (10 points)**

Your code should show at least 3 design patterns, and the design pattern should be used properly.

**Logging (5 points)**

Your application should use a logger to record every action that happens in your application.

**Exception handling (10 points)**

Your code should use expectation handling properly, in addition you should create your own expectations.

**Report**

You should provide a detail design report showing your diagrams with description.

**Concrete architecture (10 points)**

You should draw the concrete architecture as built for your application. The architecture should show the main components and the class diagrams.

**Your code should adhere to design and class quality principles. Any issues or deviations from these principles will impact the final grade**

**The presentation**

The main idea in the presentation is to demonstrate your application. All team members should participate in the presentations.

**The code delivery**

You should use github to collaboratively work on your project. The number of commits and changes each team member does will be taken into consideration separately.

**You need to provide the code with a pull request that shows all your changes. You can do this by creating a main branch with the base code. Then, create a dev branch and add all your changes to the dev branch. Finally, create a pull request from dev to the main branch**

**Thank you  
Good luck**