SMS   School Management System (SMS)

CMPS 356 Project Phase 2 – Web API and Data Management using MongoDB (15% of the course grade).

The project phase 2 submission is due by midnight Saturday 17th April 2021.

1. Deliverables

You are to complete the implementation of the School Management System (SMS) Web App by delivering the following:

1. Addressing the project phase 1 feedback given during the demo session and the requested corrections in the grading sheet.

2. Design and implementation of the database schema to manage the data in a MongoDB database (including a schema diagram in the project report). The implementation should use mongoose and Node.js.

3. Populate the database with the data from the json files.

4. Update the *repositories* implementation to offer the same functionality as phase 1 but it should manage the data on the server-side using MongoDB as the data source. All data filtering should be done by MongoDB server and only the required data should be retrieved. The implementation should make use of MongoDB capabilities (e.g., using aggregate query to get the data for the aggregate report).

5. Implement Web API to make to app functionality remotely accessible via HTTP.

6. Update the Web UI implementation to use the Web API.

7. Write a testing document including screenshots of conducted tests illustrating a working implementation.

8. Every team member should submit a description of their project contribution. Every team member should participate in solution demo and answer questions during the demo.

Important notes:

- Continue posting your questions to Q & A Channel on Microsoft Teams.

- Do not forget to submit your design and testing documentation (in Word format) and fill-up the Functionality column of the grading sheet using the provided phase 2 template.

- Push your implementation and documentation to your group GitHub repository as you make progress.

- You need to test as you go!

Seek further clarification about the requirements/deliverables during the initial progress meeting with the instructor. Note that further important clarifications maybe to this document and you will be notified.

2. Grading rubric

Criteria	%	Funct Ionality*	Quality of the implementation	Grade
Addressing the project phase 1 feedback	10			
Design and implementation of the database schema to manage the data in a MongoDB database (including a schema diagram in the project report).	10			
Populate the database with the data from the json files.	5			
Repository Implementation to read/write data from/to MongoDB	30			
Web API implementation	25			
Change Web UI to use the Web API.	20			
Testing documentation with evidence of correct implementation using snapshots illustrating the results of testing (you must use the provided template).	5			
Total	100			
Copying and/or plagiarism or not being able to explain or answer questions about the implementation.	0			

* **Possible grading for functionality**: *Working* (get 60% of the assigned grade), *Not working* (lose 40% of assigned grade and *Not done* (get 0). The remaining grade is assigned to the quality of the implementation. In case your implementation is not working then 40% of the grade will be lost and the remaining 60% will be determined based on of the code quality and how close your solution to the working implementation. Solution quality also includes meaningful naming of identifiers, no redundant code, simple and efficient design, clean code without unnecessary files/code, use of comments where necessary, proper white space and indentation.

Marks will be reduced for code duplication, poor/inefficient coding practices, poor naming of identifiers, unclean/untidy submission and unnecessary complex/poor user interface design.