LaSalle College Montréal	**Course Number: 420-DW4-AS** **Course Title: Web Server Applications Development II** **Teacher: Quang Hoang Cao** **Session: Winter 2023** **Group: 7256**

Final Project

(Individual)

Evaluation Weight: 30 % (out of the total mark for the course)
Due Date: **November 30, 2023**

This final project helps you to *master the competencies required for the course*. The project focuses on analyzing, designing, implementing and testing an application using Visual Studio 2022, ASP.NET Core MVC/ASP.NET MVC, C# and SQL Server 2019.

Competencies-codes:

Develop transactional Web applications - 00SU
Develop data exchange services - 00SV

Elements of the competencies

00SU
1. Analyze the application development project. 3. Prepare the database. 4. Program the Web interface. 5. Program the server-side application logic. 6. Program the client-side application logic.
00SV
4. Program the application logic for the service. 5. Program a test application using the service.

Relevant performance criteria

1.2 Proper identification of the tasks to be carried out
3.1 Suitable creation or adaptation of the database
3.2 Proper insertion of initial or test data
3.3 Compliance with the data model
4.1 Appropriate use of markup language

4.2 Suitable creation and use of style sheets
4.3 Proper integration of images
4.4 Suitable creation of Web forms
4.5 Adaptation of the interface based on the display format and resolution
5.1 Proper programming or integration of authentication and authorization mechanisms
5.2 Proper programming of interactions between the Web interface and the user
5.3 Appropriate choice of clauses, operators, commands or parameters in database queries
5.4 Correct handling of database data

6.3 Proper programming of interactions between the Web interface and the user
6.4 Systematic use of Web form data validation techniques
6.5 Web forms in compliance with usability requirements

4.1 Proper programming or integration of authentication, authorization or secure connection establishment mechanisms
4.2 Proper programming of the reception of input data
4.4 Correct handling of database data
4.5 Proper programming of the response of output data

5.1 Precise retrieval of the service interface
5.2 Appropriate use of the service
5.3 Proper conversion of the data provided by the service into run data using a test application

Critical thinking.
Autonomy, initiative.
Time management.
Analytic and synthetic.

I. Case Study: Property Rental Management Web Site

Project Description	**Property Rental Management Web Site** allows any potential tenant to search an apartment that is suitable for his/her needs. The Web site also helps the property owner and the property manager to facilitate the management tasks of property rental.
Users and Operations	**Property Owner ,Administrator** ✓ Create/Update/Delete/Search/List any property manager account ✓ Update/Delete/Search/List any potential tenant account ✓ Full control of the Web Site
	Property Manager ✓ Perform CRUD operations related to buildings ✓ Perform CRUD operations related to apartments ✓ Keep track of apartments status ✓ Schedule potential tenants 'appointments ✓ Respond to potential tenants 'messages ✓ Report any events to the ***property owner*** when necessary
	Potential Tenants ✓ Create an on-line account through **Property Rental Management Web Site** ✓ View any apartment suitable for their needs ✓ Make an appointment with the ***property manager*** ✓ Send necessary messages to the ***property manager***
Technologies used for Client Side	CSS3, HTML5 and JavaScript
Technologies used for Server Side You can choose one of the following options: 1. ***ASP.Net Core MVC*** (Recommended)	• *ASP.NET Core - Development Environment Setup* • *Creating an ASP.Net Core Project* • *Structure of an ASP.Net Core Project* • *ASP.Net Core – Dependency Injection* • *ASP.Net Core – Middleware* • *Developing ASP.Net Core MVC* • *Using Entity Framework Core (DB First/Code First Approach)* • *Creating Web API for CRUD Operations* • *Consuming Web API in ASP.Net Core MVC* • *Configuring Dependency Injection with Web API* • *ASP.Net Core Security* • *Deploying an ASP.Net Core MVC Application (optional)*

2. ASP.Net MVC	• Programming Language : C# • MVC Folder Structure • Routing in MVC • Using Controllers in ASP.Net MVC (Action Method, Action Selectors, Action Verbs) • Using Model in ASP.Net MVC • Using Views in ASP.Net MVC • Using the Entity Framework (DB First/Code First Approach) • Integrating Bootstrap in an ASP.NET MVC • Integrating Controller, View and Model • Razor pages • Using HTML Helpers • Security in ASP.NET MVC • Consuming Web API in ASP.NET MVC

II. Final Project Report

Course Number: 420-DW4-AS
Course Title: Web Server Applications Development II
Session: Autumn 2023
Group: 7262

FINAL PROJECT REPORT

TITLE:

DUE DATE:

SUBMITTED

TO

TEACHER: QUANG HOANG CAO

BY

YOUR NAME AND STUDENT NUMBER

I. PROJECT DESCRIPTION

A short description of the application

II. PROJECT DEVELOPMENT

PHASE I ANALYSIS

1. Read the project's requirements very carefully; make sure you understand them properly.
2. Functional Requirements Document

PHASE II DESIGN

Based on the option chosen to develop the application

PHASE III IMPLEMENTATION

Based on the option chosen to develop the application

PHASE IV TESTING THE PROGRAM

Hints: In Table Format

User	Functional Requirement	Test Result/Problem(s)

III. CONCLUSION

Specify clearly, what you have learned from this course.

IV. BIBLIOGRAPHY

Specify all the sources you have used in your projects, including the Web Sites referenced.

III. Final Project Evaluation

Requirements	Points	Auto-Evaluation
Property Owner ,Administrator ✓ Create/Update/Delete/Search/List any property manager account ✓ Update/Delete/Search/List any potential tenant account ✓ Full control of the Web Site	20	/20
Property Manager ✓ Perform CRUD operations related to buildings ✓ Perform CRUD operations related to apartments ✓ Keep track of apartments status ✓ Schedule potential tenants 'appointments ✓ Respond to potential tenants 'messages ✓ Report any events to the ***property owner*** when necessary	30	/30
Potential Tenants ✓ Create an on-line account through **Property Rental Management Web Site** ✓ View any apartment suitable for their needs ✓ Make an appointment with the ***property manager*** ✓ Send necessary messages to the ***property manager***	30	/30
Final Project Presentation	10	/10
Final Project Report	10	/10

Important Notes

1. Absence from the ***Final Project Presentation*** without valid reason automatically results in 0/10.
2. Lack of ***Final Project Report*** also results in 0/10.

I. Plagiarism and Fraud

Plagiarism and fraud *(article 5.16)*

Plagiarism, attempted plagiarism or complicity in plagiarism during an assignment or any evaluated task contravenes the rules. This includes (but is not limited to):

- *the whole or partial presentation (reference, paraphrase, summary, translation, insertion) of the work of another (text, illustration, film, music, etc. on paper or online) as one's own, or failing to cite a source;*
- *the use of another student's exam during an exam;*
- *the use of an assignment done for another course or a project already submitted in the past, which is passed off as an original work.*

Fraud, attempted fraud or complicity in fraud constitutes an infraction.
This includes (but is not limited to):

- *the possession or use of any unauthorized document, material or equipment during an exam, including the use of technological tools;*
- *the execution of an evaluated task by another person;*
- *the substitution for another person during an exam, assignment or any evaluated task;*
- *the possession of the questions or answers of the exam;*
- *the obtainment of any aid not authorized in advance by the teacher.*

Plagiarism, attempts at plagiarism or fraud, or collaboration in plagiarism or fraud are prohibited and considered serious offences. Thus, any instances of plagiarism or fraud will lead to a grade of '0' for the assignment in question. In addition, a note will be made in the student's file and the student will receive a written notice from his or her Program Directorate to that effect.

In the case of recidivism, in the same course or in another course, the student will be given a grade of '0' for the course in question. A second note is made in the student's file and the student will receive a summons from his or her Program Directorate. For a third offence, he or she may be expelled from the College.