LaSalle College
Montréal

Final Evaluation: 40%

Course Identification

Name of program – Code:	INFORMATION TECHNOLOGY PROGRAMMER-ANALYST (LEA.3Q)
Course title:	**WEB SERVER APPLICATIONS DEVELOPMENT I**
Course number:	420-DW3-AS
Group:	**07478**
Teacher's name:	Patrick Saint-Louis
Duration:	3 periods (150 minutes)
Semester:	Winter 2021

Student Identification

Name: _____ Student number: _____

Date: 28-04-2021 Result: _____

☐ I declare that this is an original work, and that I credited all content sources of which I am not the author (online and printed, images, graphics, films, etc.), in the required quotation and citation style for this work.

Standard of the Evaluated Competencies

Statement of the evaluated competencies– Codes

Develop non-transactional web applications – 00ST

Evaluated elements of the competencies

3. Prepare the database.
5. Program the server-side application logic

Instructions

- Class notes are not allowed and students may not use the
- No break is allowed during this exam. Students are not allowed to exit the examination room before half of the allotted time has passed. Once a student has exited the classroom, he/she may not re-enter (IPEL – Article 5.12.4).
- The teacher will not answer questions during the exam.
- Students must remain silent during the exam.
- It is the teacher's responsibility to identify language errors. If such errors are found, teachers may apply a penalty of up to 5% of the grade (IPEL – Article 5.7).
- Plagiarism, attempts at plagiarism or complicity in plagiarism during a summative evaluation results in a mark of zero (0). 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. (IPEL – Article 5.16).
- Please write clearly.

General Instructions for online exams

- **Log in at least 10 minutes in advance of the exam time.**
- **If there is a connection problem, contact the teacher immediately by MIO or TEAMS to inform him/her of the problem. Add a screenshot if possible.**
- **Your camera should be open at the teacher's request.**
- **Headphones are not permitted (except for oral comprehension exercises)**
- **Any screenshot sent in place of your work will be refused.**
- **Make sure to save the latest version before handing over.**
- **Make sure you have sent your exam correctly before the deadline.**

Specific instructions for the course:

- **Authorized material : Computer.**
- **Document format: Native file format (Do not use .zip, .rar, .7z or other).**
- **Platform used to submit: The channel named Final Exam in Teams.**
- **Your submission must include 2 files as indicated below:**
  1. **A .php file that includes the code of the form, named index_your FIRST NAME_your LAST NAME (e.g. index_patrick_saintlouis).**
  2. **A .php file that includes the code of the form handler (action), named action_your FIRST NAME_your LAST NAME (e.g. action_patrick_saintlouis).**

If we feel that your answers may not be yours, the department reserves the right to complete your evaluation with a virtual meeting to verify that you have reached the required competency.

Mark Breakdown

This evaluation is on 100 points, distributed as follows:

Questions	1	: 1	production scenario	worth	100	points	For a total of	100.00 points

TOTAL: 100 POINTS

EXERCICE 1 –
Performance criteria: 3.1 to 3.3 ; 5.1 to 5.4
Weighting: 100 points ;

1-Create a registration form named index.php that allows users to write their:

1. First name. => Type: text.
2. Last name. => Type: text.
3. Midterm grade. => Type: number between 0 to 30.
4. Project grade. => Type: number between 0 to 30.
5. Final Exam grade. => Type: number between 0 to 40.

2-Create a form handler (action) that uses the superglobal variable POST to receive the data collected from the registration form in order to:

A. Save data to a MySQL database table using the extension mysqli. The data saved include:
    1. id
    2. First name
    3. Last name
    4. Midterm grade
    5. Project grade
    6. Final grade
    7. Total (is the sum of Midterm, Project, and Final grades)

B. Display all existing information recorded in the database table columns within a new page that does not include the registration form but includes a link (or button) to go back to the registration form.

Technical specifications

1. Database name : “school”.
2. Database table name : “grades”.
3. Columns names: “stud_id, stud_fname, stud_lname, mid_grade, proj_grade, final_grade and total”.
4. Create the database, table, and columns within the program when they don’t exist yet.
5. Use the column “stud_id” as primary key and auto increase (increment) it.
6. Add a significant user error message including the use of the method mysqli_connect_error() is displayed when connection to mysqli fails.

7. Add a significant user error message including the use of the property error (e.g. $connection->error) when the following queries fails:
    a. Create the database
    b. Connect to the database
    c. Create the table and columns
    d. Connect to the table
    e. Insert rows to the table columns
    f. Select rows from the table columns

For example:

```
if ($create_db === FALSE)
  die("Fatal Error - DB cannot be created because" . $connection->error);
else {
     //Do the next tasks
}
```

8. Close the connection to the database at the appropriate place within the program.

9. Do not add other components or style (e.g. buttons, hyperlinks, header, footer, CSS, Bootstrap) to the program. You will not have enough time to do this.

Evaluation Grids

Exercise 1

Element of competency:	3. Prepare the database. 5. Program the server-side application logic				
Performance criteria	**Highly satisfactory**	**Satisfactory**	**Unsatisfactory**	**Highly unsatisfactory**	**Total**
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 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	50 each	40 some	30 some	0 each	**/100**

See the detailed evaluation grid for details.

CORRECTION GRID FOR LANGUAGE

Clear Communication	Clear Communication, **most of the time**	Vague Communication	Unclear Communication
- 0	- 0,5	- 1,5	- 2
(Word Choice) Use of precise and rich vocabulary	(Word Choice) Use of precise vocabulary	(Word Choice) Use of imprecise vocabulary	(Word Choice) Use of inappropriate vocabulary
- 0	- 0,5	- 1,5	- 2
(Format/Type of work) Respect of norms	(Format/Type of work) Respect of **most of the** norms	(Format/Type of work) Non-respect of the norms	(Format/Type of work) Inappropriate in relation to the required norms
- 0	- 0,5	- 1,5	- 2
(Linguistic Code) (≤2 mistakes / page)	(Linguistic Code) (3-7 mistakes/page)	(Linguistic Code) (8-10 mistakes/ page)	(Linguistic Code) (>10 mistakes/ page)
- 0	- 0,5 - 2.5	- 2.5 - 3.5	- 4