



Final Exam: 40%

Course Identification

Name of programs – Codes:	COMPUTER SCIENCE TECHNOLOGY– PROGRAMMING - 420.BP INFORMATION TECHNOLOGY PROGRAMMER- ANALYST - LEA.3Q
Course title:	WEB CLIENT DEVELOPMENT
Course number:	420-DW2-AS
Group :	07036
Teacher:	Ramiro Guerreiro
Test Duration:	3 periods (150 minutes)
Session :	Summer 2022

Student Identification:

Name: _____ Student number: _____

Date: _August 3rd, 2022_____ 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 Competency

Statement of the evaluated competency – Code

- Develop non-transactional Web applications - 00ST

Instructions

- Dictionaries, tablets and cell phones are **not** allowed.
- Notebooks are allowed.
- 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 are not allowed to communicate to each other 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.

Mark Breakdown

This evaluation is on 100 points, distributed as follows:

- | | |
|-----------|-----------|
| • Item 1 | 1 point |
| • Item 2 | 4 points |
| • Item 3 | 4 points |
| • Item 4 | 4 points |
| • Item 5 | 4 points |
| • Item 6 | 7 points |
| • Item 7 | 4 points |
| • Item 8 | 7 points |
| • Item 9 | 1 point |
| • Item 10 | 4 points |
| • Item 11 | 5 points |
| • Item 12 | 7 points |
| • Item 13 | 12 points |
| • Item 14 | 12 points |
| • Item 15 | 12 points |
| • Item 16 | 12 points |

TOTAL: 100 POINTS

Case Study:

Using HTML5, CSS3 and JavaScript, create a page with a form as shown below:

Montreal -Tourism

A trip evaluator for a visit

Visitor name: *

Sex: * ☐ Male ☐ Female

Age: * years

Phone: *

Number: persons

Duration: days

Hotel:

Room Type:

Activities: ☐ City-bus-tours Can\$ 20
☐ Spa-Manager Can\$ 100
☐ Sport Event Can\$ 150

It is required:

1. To ensure more uniformity in different browser, you are required to reset CSS before defining the style. (1 point)
2. The color of the container area is #D1EEEE. Its width is 400px and it must be horizontally centralized. The top side of the form must be 20px away from the top side of the browser window. The corners of the form must be rounded by 5px. (4 points)
3. The container area must have an internal shadow on the top and left side. The displacement of the shadow must be 1px horizontally and 1px vertically. The blur must be of 4px and the color #999999. (4 points)
4. The top heading must have a font size of 30px, be in bold and be centered. It must be 10px below the top side of the container area. (4 points)
5. The second heading must have a font size of 20px, be in bold and be centered. It must be 30px away from the top heading. (4 points)
6. The form **itself** is 30px below the second heading. It is organised as two columns. Each cell has an internal margin of 10px and with vertical alignment by the top. The cells in the first column have width of 110px and the left internal margin is 20px. (7 points)

7. When the cursor is over an item of the form, the text of the item (in cells in both columns) must become bold (but the input elements must not move). The transition to bold and back to normal must take approx. 0.7s. (4 points)
8. In the first item ("Visitor name"), the textbox must have a size of 30 characters and support a text having up to 50 characters. The message "your name" in the textbox must disappear as soon as the user starts typing in the textbox. Round cases are radio buttons and square cases are check boxes. "Age" corresponds to a textbox having size of 5 characters and supporting a text up to 5 characters. "Phone" corresponds to a textbox having size of 19 characters and supporting a text up to 19 characters. It must have a placeholder: "nn-(nnn)-nnn-nnnn". "Number:" corresponds to a drop-box with options 1 to 6. "Duration:" corresponds to a drop-box with options 1 to 15. "Hotel:" corresponds to a drop-box with options 1 star to 5 stars, being 3 stars the default. "Room Type" corresponds to a scroll box with the options "Single room", "Semi-suite" and "Suite". All of them are visible and "Semi-suite" is the default. (7 points)
9. Both in the items "Sex" and "Activities" the radio button and checkboxes can be chosen also by clicking on the text to the right. (1 point)
10. The button "Evaluate" is to submit the form and the button "Reset" to clean all the answer and return the form to its initial state. Each of those two buttons must have a margin of 20px. (4 points)
11. When submitting, the user information must be validated. Write a JavaScript function `validate_user()` to validate the user information so that the form will be actually submitted only if the user information pass the following validation tests. (5 points)
12. Visitor name cannot be left empty. If it is empty, a message must be presented to the user saying the name must be filled out. (7 points)
13. Visitor name must be a sequence of names, each one starting with an upper case letter followed by one (at least one) or many lower case letters. Names must contain only letter from a to z. Names must be separate by one or more blanks. If this test fails, a message must be presented to the user saying the name is invalid. Multiple blanks between names must be replaced by a single blank. Blanks before the first name and blanks after the last name must be removed. (12 points)
14. A birth sex must be chosen. If this test fails, a message must be presented to the user saying a birth sex must be chosen. (12 points)
15. A valid "age" must be an integer numbers, greater or equal than 18 and less or equal than 110. If this test fails, a message must be presented to the user saying the age is invalid. (12 points)
16. A valid phone number has a country code of one to three digits followed by "-", an area code of three digits between parentheses followed by "-", followed by a seven digits in the format "nnn-nnnn", that is a three digits block followed by "-" followed by a four digits. The country code is optional. The parentheses around the area code are also optional, but if they are used, they must be in matching pair. If this test fails, a message must be presented to the user saying the phone number is invalid. (12 points)

Remark: At the end of the exam, zip the folder containing your HTML, CSS and JavaScript files and upload the zip file into LEA.

Correction Grid

Case Study					
Elements of the competency: 00ST.4. Program the Web interface.					
Performance criteria	Highly satisfactory	Satisfactory	Unsatisfactory	Highly unsatisfactory	Total
4.1 Appropriate use of markup language.	13-15	9-12	7-8	0-6	/45
4.2 Suitable creation and use of style sheets	13-15	9-12	7-8	0-6	
4.4 Adaptation of the interface based on the display format and resolution.	13-15	9-12	7-8	0-6	
Elements of the competency: 00ST.6. Program the client-side application logic.					
Performance criteria	Highly satisfactory	Satisfactory	Unsatisfactory	Highly unsatisfactory	Total
6.1 Correct manipulation of DOM objects.	9-10	6-8	5	0-4	/30
6.2 Proper programming of interactions between the Web interface and the user.	9-10	6-8	5	0-4	
6.3 Proper programming and integration of animations and widgets.	9-10	6-8	5	0-4	
Elements of the competency: 00ST.7. Control the quality of the application.					
Performance criteria	Highly satisfactory	Satisfactory	Unsatisfactory	Highly unsatisfactory	Total
7.5 Compliance with design documents	21-25	15--20	11-14	0-10	/25

CORRECTION GRID FOR LANGUAGE

Clear Communication	Clear Communication, most of the time	Vague Communication	Unclear Communication
- 0	- 0,25	- 0,75	- 1
(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	- 0,25	- 0,75	- 1
(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	- 0,25	- 0,75	- 1
(Linguistic Code) (≤2 mistakes / page)	(Linguistic Code) (3-7 mistakes/page)	(Linguistic Code) (8-10 mistakes/ page)	(Linguistic Code) (>10 mistakes/ page)
- 0	- 0,25 - 1.25	- 1.25 - 1.75	- 2