



Final Evaluation: 40%

Course Identification

Name of program – Code: COMPUTER SCIENCE TECHNOLOGY–
PROGRAMMING - 420.BP

Information Technology Programmer-
Analyst - LEA.3Q

Course title: **WEB CLIENT DEVELOPMENT**

Course number: 420-DW2-AS

Group: 07270

Teacher's name: ADIN ASHBY

Duration: 3 periods (150 minutes)

Semester: Fall 2024

Student Identification

Name: _____ Student number: _____

Date: December 18, 2024 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(ies)

Statement of the evaluated competency(ies) – Code(s)

Develop non-transactional Web applications - 00ST

Evaluated elements of the competency(ies)

4. Program the Web interface.
6. Program the client-side application logic.

Instructions

- **Use of AI is not allowed during the exam. However, students are allowed to use their class notes and have internet access.**
- 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)
- Students are responsible to make sure they have their login credentials to submit their solution.
- Students are responsible to make sure they have submitted the correct version of their exam.

General guidelines for online reviews:

- **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.**

If we feel that your answers may not be yours, the department reserves the right to complete your evaluation with a virtual meeting.

How to submit the exam:

The students should submit their solution of the exam by simply pushing back to the repository they cloned their handout.

Mark Breakdown

This evaluation is on 100 points, distributed as follows:

Question 1	HTML Structure and Layout	For a total of 20 points
Question 2	CSS Styling and Layout	For a total of 25 points
Question 3	JavaScript Functionality	For a total of 30 points
Question 4	jQuery Enhancements	For a total of 25 points
TOTAL: 100 POINTS		

Instructions

Build a single-page application following the tasks below. Ensure to use HTML, CSS, JavaScript, and jQuery for interactive functionality. Use coding best practices and keep your code organized. Remember, while referencing material is allowed, the work must be your own.

Question 1: HTML Structure and Layout (20 points)

Create the HTML structure for a webpage that includes:

- **Sections:** A header with the title "Web Development Final Exam", a navigation bar with links to "Home", "Projects", and "Contact", a main content section with a subheading and paragraph, and a footer with your name and the current year.
- **Table and List:** Within the main section, create a table displaying at least three projects with details (name, description, and date). Add a bulleted list of programming languages used in each project.

Question 2: CSS Styling and Layout (25 points)

Style the webpage using external CSS:

- **Navigation and Layout:** Use CSS to style the navigation bar horizontally and align the main content in the center.
- **Box Model and Flexbox:** Apply padding, margin, and borders to each section. Use flexbox to align the content in the main section and make it responsive.
- **Additional Styles:** Use colors, fonts, and hover effects for links, buttons, and other interactive elements.

Question 3: JavaScript Functionality (30 points)

Enhance your webpage's interactivity using JavaScript:

- **Form Validation:** Add a form in the Contact section that includes inputs for name, email, and a message. Implement JavaScript to check that all fields are filled in before allowing submission.
- **Dynamic Content Update:** Create a button that, when clicked, dynamically adds a new project row to the table with sample data.
- **Interactive Effects:** Use JavaScript to create a simple "scroll to top" button that appears when the user scrolls down and scrolls back up when clicked.

Question 4: jQuery Enhancements (25 points)

Use jQuery to add additional effects and streamline the functionality:

- **Form Validation with jQuery:** Use jQuery to simplify the validation process for the contact form. Ensure the form provides feedback to the user if required fields are missing.
- **Animations:** Add a fade-in effect to the main content when the page loads and a slide-down effect for the navigation menu when hovered.
- **Dynamic List Update:** Create a button that toggles visibility for a "Resources" list, using jQuery to show/hide it with a smooth transition.

Evaluation grid

Questions 1 (20 points)

Element of competency: Develop non-transactional Web applications - 00ST	
Performance criteria	weight
4.1 Appropriate use of markup language	/15
4.4 Adaptation of the interface based on display format and resolution	/5

Questions 2 (25 points)

Element of competency: Develop non-transactional Web applications - 00ST	
Performance criteria	weight
4.2 Suitable creation and use of style sheets	/20
6.3 Proper programming and integration of animations and widgets	/5

Questions 3 (30 points)

Element of competency: Develop non-transactional Web applications - 00ST	
Performance criteria	weight
6.1 Correct manipulation of DOM objects	/10
6.2 Proper programming of interactions between the Web interface and the user	/20

Questions 4 (25 points)

Element of competency: Develop non-transactional Web applications - 00ST	
Performance criteria	weight
6.2 Proper programming of interactions between the Web interface and the user	/15
6.3 Proper programming and integration of animations and widgets	/10

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