

National College of Ireland

BSc (Honours) in Computing - Evening,
Year 1, BSCHE1

Release date: 26 June 2025 @9am

Due date: 02 August 2025 @11.55pm

Lecturer: Hamilton V. Niculescu

Web Design and Development Project brief – 60% (group-based)

Weight: This assignment is worth 60% and will be marked out of 100%

Instructions: Notepad++ or Sublime IDE to be used (no IDEs or text editors that autogenerate code are to be used).

Submission extension: If you need to apply for an extension - <https://nci360.ncirl.ie/>

TURNITIN: All report submissions will be electronically screened for evidence of academic misconduct (i.e., plagiarism and collusion)

Use of AI in Teaching and Learning: Student Guide

<https://libguides.ncirl.ie/useofaiinteachingandlearning/studentguide>

Note: A live Viva via MS Teams may be necessary, in cases where further clarifications are sought to be provided by the students in relation to their submitted work.

LO2	Use HTML, CSS and JavaScript in the design and creation of web pages.
LO3	Use JavaScript to manipulate the DOM
LO4	Debug and optimise client-side code
LO5	Deploy websites online

Project Submission Overview:

The project will be completed as part of a group of three members.

- Submission is **1 website** and **1 project report** per group.
- Submission contains website folders and document containing report or link to video report (report template available on Moodle).
- **Everybody** is required to fill in and submit a peer evaluation form (template available on Moodle).
- There will be live, in-class presentations in Week 12, during class time.

Final project submissions will be assessed during presentations. **Any student that doesn't attend the presentation will receive a mark of 0 (zero).**

Students who miss the presentation with approved personal circumstances will present the project individually at a later date – the remaining group members will present as scheduled.

Project Requirements:

The theme of the project is “**Sustainability**”. See the [17 Sustainability Goals](#)

You are a collective that creates sustainable solutions. You need to choose a theme for your collective from the 17 Sustainability Goals.

Each team member has their own specialist area on the website consisting of at least 2 pages. These will incorporate a form allowing a visitor to contact them and show that member’s area of specialisation.

The website content should demonstrate research and clearly address the given topic.

- Website has at least 2 pages done by each group member, comments at the top of each webpage and in the shared CSS file to clearly identify your own code for grading.
- The website needs to be responsive using Bootstrap or a responsive framework (you cannot use a theme).
- The website needs to demonstrate good file path structure.
- Each student must demonstrate the following on their webpages:
 - Have well-formed and well organised HTML and JS
 - Contribute to the single CSS file (comment your own code)
 - Manage at least 4 images on a single webpage in a grid format.
 - A form with at least 4 fields that uses JS for validation of the fields (not only HTML validation).
 - Consistent, responsive navigation across all webpages.
 - Every webpage to have 2 pieces of JS to manipulate the DOM. They need to be unique.
 - JS needs to include randomisation and arrays.
 - Comments to show your understanding.
- The project is accompanied by a video presentation, details below
- The project is also accompanied by a written report, details below.

Video presentation:

A 10 min. long video presentation of your website showing every webpage, the DOM manipulation and demo of the JS form validation in operation. Demonstrate navigation, behaviour / interactivity of web elements, responsiveness, input validation, etc.

You can open a Teams meeting and record it. Please set the permissions to be visible by anyone with the link otherwise it cannot be graded. Alternatively, you can upload it on YouTube as “unlisted” and share the link in the report.

Project Report:

A DOCX / PDF file to contain the following:

- Wireframes for desktop and mobile for every webpage.
- HTML validation – screenshots of before and after for every webpage.
- [Google page speeds](#) testing - screenshots of before and after for every webpage.
- Provide the link to the deployed website.
- Provide the links to the public GitHub repo for each student with at least 5 commits demonstrating on-going work.
- Provide the link to the video demonstration file. Ensure that anyone with the link has the necessary privileges to view / access the video file.

Marking rubric on the next page!

	80-100% Excellent & above	70-79% Excellent	60-69% Very good	50-59% Good	40-49% Poor	< 40% Fail
Responsive [10%]	Website is responsive with no visual errors using a responsive framework with extensive customisation. With informative comments.	Website is responsive with no visual errors using a responsive framework with some customisation. With comments.	Website is responsive with no visual errors using a responsive framework with no customisation.	Website is responsive but with some visual errors.	Website is responsive but with visual errors.	Website is not responsive
Web page element implementation [20%]: gallery, form, navigation, DOM manipulation, etc	Excellent implementation of elements, all requirements implemented excellently, working perfectly, visually appealing and have advanced functionality. . JavaScript: Excellent form validation using JavaScript. Visually appealing and clear to users. With informative comments.	Gallery is visually appealing and has required functionality AND Images are optimised. Form with validation using JavaScript. With comments.	Gallery is visually appealing and has basic functionality AND Images are optimised. Form with some basic validation using JavaScript.	Gallery is visually appealing and either has no functionality OR Images are not optimised. Form with some basic validation using HTML 5.	Gallery is visually appealing and has no functionality. Images are not optimised. Form with minimal or no validation.	Gallery is visually unappealing and has no functionality. Images are not optimised. No form.
Code implementation [20%]	Excellent & well organised code, excellent formatting by student using a simple editor not an IDE, excellent & appropriate use of commenting that shows understanding. CSS in single external file. No errors. Excellent & appropriate file structure & file paths demonstrated.	Very good & well organised code. Very good formatting by student using a simple editor not an IDE, very good & appropriate use of commenting that shows understanding. CSS in single external file. No errors. Very good & appropriate file structure & file paths demonstrated.	Good & well organised code. Good formatting by student and may have used an IDE, good & appropriate use of commenting that shows understanding. CSS in single external file. No errors. Good & appropriate file structure & file paths demonstrated.	Code is organised, some tags not closed. Good formatting by student, appropriate commenting that shows some understanding. CSS in more than 1 external file. Some errors. Demonstration of file structure or file paths.	Poor code. Some formatting by student, some commenting that is descriptive rather than shows understanding. CSS in more than 1 external file. No demonstration of file structure or file paths.	Very poor code, no formatting, no comments to show understanding, minimal or no external CSS.
JavaScript implementation [20%]	Required functionality of randomization, arrays and form validation is excellently implemented and working, using well-structured code. Visually appealing and easy to use.	Required functionality of randomization, arrays and form validation is well implemented and working, using well-structured code. Visually appealing and easy to use.	Required functionality of randomization, arrays and form validation is implemented to a good level and working, using well-structured code. Visually good.	Most of the basic functionality of randomization, arrays and form validation is implemented with some errors. Not well-structured code. Visually not very appealing or easy to use.	Poor JavaScript. Some basic functionality or functionality with errors.	Minimal or no JavaScript.
Deployment [5%].	Website deployed.	Website deployed.	Website deployed.	Website deployed.	Website deployed.	Website not deployed.
Testing (requires deployment) and optimisation [10%]	Webpages tested with the HTML and CSS validator with excellent result. Optimised via Google Page Speed rankings – excellent result. Excellent documenting of testing, image optimisation.	Webpages tested with the HTML and CSS validator with very good result. Optimised via Google Page Speed rankings – good result.	Webpages tested with the HTML and CSS validator with adequate result. Optimised via Google Page Speed rankings – adequate result.	Webpages tested with the HTML and CSS validator with poor result. Optimised via Google Page Speed rankings – poor result.	Shows little evidence of testing or optimisation, poor documenting of testing, image optimisation.	Shows no evidence of testing or optimisation, minimal or no documenting of image optimisation.

		Very good documenting of testing, image optimisation.	Very good documenting of testing, image optimisation.	Good documenting of testing, image optimisation.		
Design & documenting in report [5%]	Excellent documenting of wireframes, shows excellent understanding of current vs legacy web standards. References are complete, appropriately and correctly used.	Very good documenting of wireframes, shows very good understanding of current vs legacy web standards. References are complete, appropriately and correctly used.	Good documenting of wireframes and shows good understanding of current vs legacy web standards. References are mostly complete and correctly used.	Documented wireframes and shows understanding of current vs legacy web standards. References are few but mostly complete and correctly used.	Some evidence of wireframing and shows some understanding of current vs legacy web standards. References are few and/or mostly incomplete.	Poor or no evidence of wireframing, poor or no understanding of current vs legacy web standards. Poor or no references.
GitHub & commits [10%]	GitHub link showing 5 commits, has used Gitbash or Git GUI successfully.	GitHub link showing 4 commits, has used Gitbash or Git GUI successfully.	GitHub link showing 3 commits, has used Gitbash or Git GUI successfully.	GitHub link showing 2 commits, has used Gitbash or Git GUI successfully.	GitHub link showing code has been drag and dropped into GitHub regardless of number of commits.	No GitHub link or a link where code cannot be viewed.