	21CSCI04I **Internet Programming** **Course Work** **2021-2022**
Informatics and Computer Science	

Module Title **Internet Programming**	
Module Leader **Prof. Gerard McKee**	Semester **Two**
Assessment Weight **50% of the total mark for the module**	Due Date **Week 8 (phase 1) and week 12 (phase 2)**

The Internet Programming coursework is a **Group Project**, to be completed in two milestones, phase 1 and phase 2, to assess client-side scripting and server-side scripting respectively.

NOTE: individual submission of work will not be accepted.

Practical skills developed by the project:
- Web pages design (HTML, XHTML, CSS)
- JavaScript technologies (JS, JSON, JQuery)
- Interactive web pages (DHTML)
- Database (MySQL)
- Server-side scripting (PHP)

Delivery schedule & marking weights:

Project Phases and Steps	Weight 100 %	Due date
Phase 1 1) Project specification 2) Web pages design (HTML & CSS) 3) Client-end scripting (Java script technologies)	**60%**	Week 8
Phase 2 4) Project specification changes 5) Database & Server-side scripting (MYSQL & PHP)	**40%**	Week 12
Total	**100%**	

A. Submission, assessment and feedback

Submission:

- Phases should be submitted via **e-learning only**, no later than the specified deadline.
- The project leader must upload their submission within the assigned deadline.

Assessment:

- The individual mark for each student will be based on both the group deliverables and the ML's assessment of the contribution of each student to the Group's work. Attendance and performance during the lab sessions will be taken into account in the individual assessment. Students can lose up to 50% of the group coursework mark based on the ML's assessment. Individual submissions are graded as Fail.

Feedback:

- Feedback will be provided for each phase in written form available on e-learning within 2 working weeks after the delivery. If students require additional feedback, they are welcome to speak with the Module Leader and the Teaching Assistants.

B. Project requirements and marking criteria

This is a group project of **4 members**. Each group will select an idea from a given list. The development of any selected project is divided into 2 phases. The first phase is about building your website using HTML and CSS, making your website interactive by adopting JavaScript technologies, and anticipating Phase 2 with the design of a database to enhance interactivity. The second phase is about using server-side scripting to connect to a database and making your website responsive to the user.

Each group is responsible for dividing the overall work among the team members. The web site design, style, functionalities, and interactivity must be discussed and agreed upon by all the team members. When distributing the work, each member has a set of **minimum contribution requirements, which are as follows:

1- **Phase (1):**
- HTML: each member should be responsible for writing the HTML code for at least a page of the web site.
- CSS: among the agreement of the overall style of the web site, each member should be responsible for writing the CSS for at least 2 HTML elements.
- JavaScript and jQuery: each member must be responsible in implementing at least 1 function to add an effect and make the web site interactive.
- Database design.

2- **Phase (2):**
- Each member must implement at least one functionality for each of the client and server sides.

A check list to report the group members work contribution will be provided for each phase in which each group will have to fill and submit with the submission of each phase.

Any group member failing to achieve those minimum requirements, will receive a deduction in their individual mark.

1.1 Project specification - Weight: 5%

You are required to provide a project specification, scope, identify the users, input, output and preliminary data. You are to report these items in a single document under the following headings:

- Project Specification
- Project Scope
- Users (end-users, administrators, etc.) and their access privileges
- Project inputs and outputs
- Preliminary data
- Database design
- Assumptions (if any)

1.2 Web pages design (HTML & CSS) - Weight: 10%

In this step, you are required to design your web pages using HTML and CSS, as follows:
- Generate HTML code. You may use Bootstrap to design the structure of the Web Pages.
- A navigation menu should exist in all pages.
- Put all images and logos in a separate folder named "*images*".
- CSS must be placed in a separate file "*styles.css*" and will be placed in "*includes*" folder. And when appropriate use inline or in-file CSS.
- HTML and CSS code must be well-indented and internally organized.
- Meaningful files naming are a must.
- Your home page must be named "*home.htm*".
- All administration section files will be placed in a separate folder "*admin*".

Finally, your web project folder should be organized as follows:

- Folder "images"
- Folder "includes", containing header, footer, styles.
- Folder "admin", containing all administration section html files
- Home.htm
- All front-end user files.

1.3 Client-end scripting (Java script technologies) – Weight 40%

In this step, you are required to turn your designed web pages into interactive pages. You must use Java script technologies as follows:

- Java script code will be externally separated in a file, named "*scripts.js*" and saved in "*includes*" folder. Also, when appropriate use inline and in-file scripts.

- All data entry forms must be properly validated using java script functions, displaying appropriate messages to the user.
- Navigation menu should be edited to include DHTML effects.
- Use jQuery to further add effects in pages to make them more interactive.
- Code should be modular, indented and well-organized, as well as using naming convention.

Note: Create a new copy of your project folder for this step, leaving the previous one separately in its original folder.

1.3 Database Design – Weight 5%

In this step you are required to design the database you will use in the second phase. You should provide:

- an ER diagram
- primary and foreign keys.

Phase 2 – Weight 45% - Due Date: Week 12

2.1 Project specification (revised) - Weight: 5%

You are required to provide an updated version of any changes in your project specification, scope, users, input, output, assumptions and preliminary data. You are to report these items in a single document under the following headings:

- Project Specification
- Project Scope
- Users (end-users, administrators, etc.) and their access privileges
- Project inputs and outputs
- Preliminary data
- Database design
- Assumptions (if any)

2.2 Database and server-side scripting - Weight: 35%

In this phase, you are required to create database & server-side scripting (PHP), as follows:

Database: Create your database using MySQL as follows:
- Create tables for preliminary data and your project data as well.
- Tables should be in a correct relational format.
- Your tables must contain sample of appropriate data (at least 10 records per table).
- Database files will be placed in a separate folder named "*data*".

Server-side scripting:

- Add server-end scripting (PHP) code to HTML files previously created (using last version of your files, the ones of phase 2). Note that files extension should be converted to ".php" before working.
- All php files must include header and footer. Header and footer files will contain repeated parts of all pages, will be named as "*header*" and "*footer*" and will be placed in "*includes*" folder.
- Data must be displayed (retrieved) properly in web pages.
- PHP code must include add, update and delete functionalities.
- Use cookies and/or session in your website.
- Use Ajax to make your website more responsive.
- Validate your forms using PHP.
- All navigation links must work appropriately.
- Finally, your web project should be complete, consistence in terms of concepts and functionality.
- Code documentation must be present in PHP files.