Good morning, everyone!

I hope you're all doing well. My name is Sajjad, and I'm the coordinator for the website development module.

First, let's discuss the arrangements for this module. Before I begin teaching it, I'd like to provide you with an overview of the module's schedule and its assessment criteria. To access this information, please visit the Aula website and log in using your student email and network password.

Once you're logged in, navigate to the 'Journey' tab. There, you'll find all the materials related to this module. I will be releasing these materials on a weekly basis.

Here, you can find an introduction to this module that includes all the details, such as class times, learning outcomes, module schedule, assessment criteria, and more. So do me a favor and read this introduction.

But think of it as a refresher, a chance to revisit what you’ve already learned.

"Here, we've got two tests for this module. The first one is scheduled for the 7th week and counts for half of your final grade. It's split into 10% for an online multiple-choice part and 40% for the practical test. The second test is in the 11th week, also making up the other half of your final score, with 10% for multiple-choice and 40% for the practical. I'm not gonna get into details about these tests. I will tell you more details about the tests in due time.

To keep you all motivated, I am offering 10 extra points aside from the standard 100-point grade. At each session, I’ll assign you an exercise. You have time to complete it till the end of class and submit it online on Aula website for 1 extra point per exercise.

It’s optional, meant for active students and participants and there are no bonus points for absentees or absent students.

Now let’s get back to our lecture.

We all know that website is a collection of one or more web pages.

The Web is a service that allows computers to share and exchange data, such as: text, images, videos, documents, etc.

And a website could be as simple as a single HTML page.

Let’s create a simple website and run it on own personal computer (local machine).

First, Search Notepad in your windows search box and open it

Type or just copy the following HTML code into Notepad:

Then just Save the Notepad file with HTML extension on your desktop.

And an Icon like this is created on your desktop.

And If you open it, The result will be like this… just a simple website right.

Here is the address of your website , drive C / desktop//

But, no one else on the planet will be able to access to my website .

Let’s think about it, What should we do to make it accessible for others? Any idea?

Yes we should take it to the internet right.

To do that we need a provider of resource or service which is called server.

AND there are different types of servers depending on what type of service they provide?

For example: if a server provides email service, it’s called an email server, if it provides file , it’s called a file server, and if it provides web service, it’s called a web server .

In this case, we need a web server to host our website and make it accessible to everyone 24 hours a day.

In fact, A web server is a computer program or software that stores and delivers web pages, web applications, and other content over the internet to web browsers and other client devices ( using HTTP protocol or other protocols )

Lets see how this structure works on the next slide.

In Client-server web architecture,

Here end users use devices or different types of computers to access the web which are called Clients.

For example your laptop, desktop, smart phone etc all are called Client machines .

On the other hand, a client program is a program that allows users to make requests .

can you name a client program? yes a web browser is a client program.

In fact, Clients and servers are connected to each other via the internet, and a client requests a resource and the server provides that resource.

A server can serve multiple clients at the same time while the client is in contact with one server.

Let me give you a more clear example:

When a user goes to their browser and types in a website .

Then ask the server for the specific page …

For example on your browser you want to open facebook website, like this:

you type the address of facebook website into your web browser.

<https://www.facebook.com>

The browser will search if the website exist…And make an http request to the sever for facebook website

The server reacts to the request ..I mean, server processes your request and fetches data from the data base and sends facebook web page to your web browser.

In client-server web architecture, the client-side and the server-side communicate with each other using HTTP protocol.

What is web development?

Website development is the process of building, maintaining, and programming websites and web applications. It involves a variety of tasks, including: planning and research, design, coding, testing, and deployment

A computer and phone with text

Description automatically generated with medium confidence

Web development is the process of creating and maintaining websites or web applications. It involves designing, coding, and organizing the elements of a website to make it functional and visually appealing for users on the internet.

Frond End Development

Front-end development in web development is about creating the user interface and user experience of a website. This includes designing and coding the visual elements, layout, and interactivity that users see and interact with in their web browsers. It involves HTML, CSS, JavaScript, and other technologies to ensure a responsive, visually appealing, and user-friendly website.

3 layers of web design:

A group of buildings with text

Description automatically generated

Back End Development

A computer screen with text

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A close-up of a computer code

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The statement "3 layers of web design: 1 - structure (HTML), 2 - Style (CSS), 3 - Behavior (JavaScript)" refers to the fundamental components or layers involved in creating and designing a website. Each of these layers serves a distinct purpose in web development:

1. \*\*Structure (HTML - HyperText Markup Language):\*\* This is the foundational layer responsible for defining the content and layout structure of a web page. HTML uses various elements (e.g., headings, paragraphs, lists) to organize text and multimedia content on a webpage. It establishes the hierarchy and arrangement of the information, creating the skeleton or structure of the web page.

2. \*\*Style (CSS - Cascading Style Sheets):\*\* CSS is used to enhance the presentation and visual appeal of a web page. It allows web designers and developers to control the appearance of HTML elements. With CSS, you can specify colors, fonts, spacing, positioning, and other visual properties. By separating style from structure, CSS promotes consistency and flexibility in web design.

3. \*\*Behavior (JavaScript):\*\* The behavior layer, often implemented with JavaScript, adds interactivity and dynamic functionality to a web page. JavaScript is a programming language that enables you to create interactive features such as form validation, image sliders, responsive menus, and more. It allows web pages to respond to user actions and events, making them more engaging and user-friendly.

In summary, these three layers work together to create a complete and functional web page. HTML establishes the structure and content, CSS enhances the presentation and style, and JavaScript adds interactivity and behavior. By separating these concerns into distinct layers, web designers and developers can work more efficiently and maintain web projects more effectively.

A computer screen with text and a person sitting at a desk

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A web developer's website page

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A page of a web designer

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1. Create your first web page

The first thing you have to learn, is HTML, which is the standard markup language for creating web pages.