Web Development Basics

[A slideshow is shown. The first slide reads: "Web Development Basics".]

Instructor: Let's go over some basics that are good to know as we begin studying web development. Let's start with the Internet.

[The slide changes to show an illustration of the earth with lines connecting to each other.]

The Internet is a global network of computers that can talk to each other. They all use the same rules or protocols so that they can communicate. The internet protocol is called TCP/IP, it stands for Transmission Control Protocol/Internet Protocol.

[The slide changes to show an illustration of the earth with a web address bar wrapping around it.]

The world wide web is a whole lot of resources like documents and applications that are on the internet. These documents can be linked together with hypertext links that when clicked, can take you to other documents and applications on the web. The protocol used on the web is called HTTP, it stands for Hypertext Transfer Protocol.

[The slide changes and images appear correlating to what is being said by the instructor.]

When a web user opens a website or a web application, a request is made to the web server that holds those web files. The user and the browser that they use, like Chrome, Edge, or Safari, is referred to as the client on the front-end, the server is the backend. The user might type in a web address, also called a URL or Uniform Resource Locator. Or they might click a link or open a bookmark. The right server will then get the request because of this URL or web address. This URL matches that to an IP address of where the website or app files are located on the server. This is done with the DNS, domain name system. A system where all web addresses or domain names are matched up with the server location of the files that were requested. The server then sends the files that were requested back to the client. Web developers often use hosting companies that already have servers in place to store the files. Then they might purchase a domain name such as mycompany.com and register that domain name with the IP address of the hosting companies servers, where they store their files. Developers can use their own web server if they don't use a hosting service.

Different languages or scripts run on the client front end and the server back-end. Html and CSS are front end languages. The code runs on the client or user's computer. Php and Python are examples of backend languages. The back-end code runs on a server before it gets to the user. Even though the HTML and CSS are front end languages, the actual files are stored on the backend server until requested. They just aren't processed or interpreted there. When a request is made, the files are sent to the client. Then the browser that is being used will run or interpret the code in the files and present the website or application on the browser screen so that the device that made the request has to interpret or render the pages or application that is sent. This is referred to as front end processing.

Things like logging a user in or processing data from a form or using a database with a website would be examples of backend processes. And that's where the backend languages would be used.

[The slide changes and shows different types of devices.]

When considering the users of our sites and applications. It's good to keep in mind that many different devices are going to be used to access our web files, like phones, tablets, laptops, et cetera. And they all have different connection speeds. Not only do the files like the HTML and CSS have to be sent, but all the images and videos that go with them. The goal is to make our sites as small and efficient as possible and still look and run well on any device.

[The slide changes and shows a computer with symbols portraying a screen reader.]

Also, some users may use screen readers that will read this site to them. Often these are visually impaired users. Developers must also take into account the needs of these users and make sure their code is written with accessibility in mind. So there we have a brief overview of some web development basics.

[End of video.]