Class – 1 Assignment 2 by *Chime Yougyal, August 22, 2025*

1. **What is a web browser?**
   A web browser is a software application that allows users to access and view websites and content on the world wide web or local files. It acts as an interface between user and web servers, when you type a website address URL or click link, the browser requests the necessary files such as HTML, CSS, and JavaScript, images or videos from the server and then renders or displays them visually on device.

2. **What is a computer program?**
   A computer program is a specific sequence or setup instructions written in a programming language that a computer follows to execute a particular task or produce specific results. It also tells the computer hardware exactly what to do.

3. **Do computers need programs in order to function?**
   Yes, all computers require system software, such as an operating system, to manage basic operations, control hardware, and allow other programs to run. Without any software or programs, a computer is essentially just a collection of electronic parts and cannot accept input, process data, or produce output on its own.

4. **What is HTML used for?**
   - Structuring the content of web pages (headings, paragraphs, lists)
   - Creating hyperlinks to navigate between pages.
   - Embedding images and videos within web pages.
   - Enhancing offline capabilities with local storage.
   - Interacting with native system features like file uploads and full screen mode.

5. **What is PHP used for?**
   PHP is a programming language used for a variety of tasks on the web server.

   - **Generating dynamic content:** It's used to create web pages that can change based on user actions or other factors, rather than static HTML files.
   - **File management**: With PHP, you can create, open, read, write, and close files on the web server. This is useful for things like saving user-uploaded content or generating log files.
   - **Form handling**: PHP can collect, and process data submitted through an HTML form, allowing you to capture user input for things like sign-ups, surveys, or contact forms.
   - **User communication:** You can use PHP to send emails to users, for example, to send confirmation or a newsletter.
   - **User tracking**: It can be used to set cookies on a user's computer, which are small pieces of data used to track their activity and remember their preferences.
   - **Database operations**: PHP is commonly used to store, search for, modify, and delete data in a database, which is fundamental for building data-driven websites.

- **Data encryption**: It provides functionality to encrypt data for secure storage and transmission, protecting sensitive information like passwords and personal details.

6. **Does HTML always include PHP code?**
   HTML does not always include PHP code.
   - A web server will automatically pass a file to the PHP processor if it has a .php extension.
   - A very simple PHP document can output only HTML. You can even save a normal .html document as a .php document, and it will display identically to the original, proving that HTML can exist without PHP code.
   - When PHP code is used, it is placed within specific tags (<?php …?>). Anything outside of these tags is treated as direct HTML.

7. **Does PHP code always include HTML?**
   PHP code does not always include HTML. But it's very common for php to be embedded within HTML to create dynamic web pages.
   - PHP can exist as pure server-side code without any HTML
   - PHP can be embedded within HTML files using PHP tags ((<?php …?>)
   - PHP files usually have a .php extension even if they contain mostly HTML
   - PHP can include or require external PHP or HTML files to build web pages modularly.
   - It could write standalone PHP scripts that output only data or perform background tasks without any HTML.

8. **What does the following code do? echo "Hello";**
   It is a PHP command that outputs the string "Hello" to the web browser.

9. **What does the following code do? Print "Hello";**
   It is a code output the text "Hello" to the web browser. Basically, echo is bit faster than print because it doesn't return value.

10. **Is this HTML or PHP code?**
    <HTML>

    <HEAD><TITLE>Page Title</TITLE></HEAD>

    <BODY>

    Hello!

    </BODY>

    </HTML>

    HTML

11. Is this HTML or PHP code?

```
$name = "Mark";

print $name;
```

PHP Code

12. What are some things you can do with PHP?

- Create dynamic, interactive web pages and applications
- Handle server-side scripting and backend logic
- Integrate seamlessly with HTML, CSS, and JavaScript
- Work with databases like MySQL for data storage and retrieval
- Manage sessions, cookies, and user authentication
- Automate tasks and system administration via command-line scripts
- Perform testing and quality assurance with tools integrated into PHP ecosystems
- Deploy applications in cloud or containerized environments

13. What are two common ways to run PHP code?

- **Using a Web Server**: PHP scripts are executed on a web server with a PHP processor, which processes the code (http://www.example.com/index.php) and sends the resulting HTML to the user's browser. This is the main method used for web development to create dynamic web pages.
- **Command Line Interface (CLI):** PHP code can be run directly from the command line or terminal using the PHP CLI (php /var/www/html/index.php) for tasks such as testing, automation, or running background scripts without needing a web server.

14. What is a variable?

- Variable is a container used in programming to store data or information that can be accessed later. Such as numbers, text, or other types of values, that can be changed and accessed during a program's execution.
- In PHP, variables start with a dollar sign ($) followed by the variable name, and they can hold different types of data like string, integers, array and more.
- Variable names can contain only the characters a-z, A-Z, 0-9, and _.
- Variable name must start with a letter or an underscore _.

15. What is a constant?

- Constant is similar to a variable in that it holds information to be accessed later, but its value is set once and cannot be changed for the rest of the program.
- Constant are not preceded by a dollar sign ($) unlike regular variables.
- It is considered good practice to name constants using only uppercase letters.
- An example use case is to store a value like the server's root directory which will not change during the program's execution.