PWS, IIS, PHP, ASP, SGML

1. PWS (Personal Web Server)

❖ **Definition:** Personal Web Server (PWS) is software provided by Microsoft that allows users to host their websites directly from their own computers. It was mainly used in earlier Windows versions (like Windows 95/98) and was designed for individuals or small-scale web hosting.

❖ **Key Features:**

➢ Hosts basic websites on personal computers.

➢ Provides support for HTML, CSS, and some dynamic scripting (like ASP).

➢ Easy to set up and use for small projects.

❖ **Limitations:**

➢ Suitable only for basic, non-commercial purposes.

➢ Lacks advanced features needed for larger or more complex websites.

➢ Has been discontinued and replaced by modern web servers like **IIS**.

2. IIS (Internet Information Services)

❖ **Definition:** IIS is a powerful and flexible web server developed by Microsoft for hosting websites, web applications, and services. It is used primarily on Windows servers.

❖ **Key Features:**

➢ Supports multiple programming languages like **ASP**, **PHP**, and **Python**.

➢ Securely hosts websites with support for **HTTPS** and SSL/TLS certificates.

➢ Allows hosting of dynamic content like e-commerce platforms, blogs, and more.

➢ Provides advanced features like load balancing, request management, and monitoring.

❖ **Applications:** IIS is commonly used by businesses and developers to deploy and manage websites and applications on the internet.

3. PHP (Hypertext Preprocessor)

❖ **Definition:** PHP is a popular server-side scripting language designed for creating dynamic and interactive websites. It is open-source and works on almost all platforms, including Windows, Linux, and macOS.

❖ **Key Features:**

➢ Can be embedded directly into HTML to make web pages interactive.

➢ Interacts with databases like **MySQL** to retrieve or store information (e.g., for login systems, user profiles).

➢ Creates dynamic content, such as forms, forums, and e-commerce websites.

➢ Widely used with platforms like **WordPress**, **Joomla**, and **Drupal**.

❖ **Examples of What PHP Can Do:**

➢ Generate web pages based on user input.

➢ Process forms (e.g., contact forms).

➢ Manage content on websites (e.g., blogs or news sites).

4. ASP (Active Server Pages)

❖ **Definition:** ASP is a server-side scripting technology developed by Microsoft for creating dynamic and interactive web pages. It is now a part of **ASP.NET**, which offers even more advanced features.

❖ **Key Features:**

➢ Allows developers to create dynamic websites that interact with databases (e.g., a product catalog on an e-commerce site).

➢ Supports multiple programming languages, including **VBScript**, **C#**, and **JavaScript**.

➢ Works seamlessly with Microsoft products like **SQL Server**.

❖ **Comparison to PHP:**

➢ Both **PHP** and **ASP** are used to create dynamic web pages, but **PHP** is open-source and works on many platforms, whereas **ASP** is typically used on Microsoft-based servers.

5. SGML (Standard Generalized Markup Language)

- ❖ **Definition:** SGML is a standard for defining markup languages. It is a powerful tool for structuring and describing documents in a consistent way. Both **HTML** (used for web pages) and **XML** (used for data exchange) are derived from SGML.
- ❖ **Key Features:**
  - ➢ Defines how information should be represented and structured.
  - ➢ Is very flexible and can handle complex documents.
  - ➢ Lays the foundation for document markup languages like **HTML** (used for displaying web pages).
- ❖ **Applications:** SGML was historically used for documentation in industries like publishing and aerospace. However, its complexity made it less popular compared to its simpler derivatives like **HTML** and **XML**.

Summary and Relationships

- ❖ **PWS:** Old software for hosting personal websites.
- ❖ **IIS:** Modern and professional web server for hosting websites on Windows servers.
- ❖ **PHP:** Language to create dynamic and interactive websites, often open-source.
- ❖ **ASP:** Microsoft's technology for building dynamic websites, often used in professional settings.
- ❖ **SGML:** A framework for defining markup languages like HTML, forming the backbone of web document structures.