**1.** **Research on OSI Layers:**

The OSI (Open Systems Interconnection) model is a conceptual framework used to understand and describe how different networking protocols and technologies work together to enable network communication. It is divided into seven distinct layers, each with its own set of responsibilities:

**a. Physical Layer (Layer 1):** This layer deals with the physical medium and transmission of raw binary data over physical cables or wireless connections.

**b. Data Link Layer (Layer 2):** It is responsible for error detection and correction, addressing, and organizing data into frames. Ethernet and Wi-Fi operate at this layer.

**c. Network Layer (Layer 3):** The network layer is responsible for routing packets across different networks. IP (Internet Protocol) is a key protocol used at this layer.

**d. Transport Layer (Layer 4):** This layer ensures end-to-end communication and reliability through protocols like TCP (Transmission Control Protocol) and UDP (User Datagram Protocol).

**e. Session Layer (Layer 5):** The session layer establishes, maintains, and terminates communication sessions between devices. It also handles synchronization and error recovery.

**f. Presentation Layer (Layer 6):** This layer deals with data translation, encryption, and compression to ensure that data can be understood by both the sender and receiver.

**g. Application Layer (Layer 7):** The topmost layer interacts directly with end-user applications. Protocols like HTTP, FTP, and SMTP operate at this layer.

**2. Comparison between `print` and `echo` in PHP:**

In PHP, both `print` and `echo` are used to output content to the browser or server logs. However, there are some key differences between them:

**a. Usage:**

- `print` is a language construct, so it is always available in PHP, and its syntax is `print(expression)`.

- `echo` is also a language construct and is commonly used in PHP. Its syntax is `echo expression`.

**b. Return Value:**

- `print` returns a value (1), which can be used in expressions. This means you can use it in assignments and comparisons.

- `echo` does not return a value and cannot be used in assignments or comparisons. It is primarily used for outputting content.

**c. Speed:**

- `echo` is generally faster than `print` because it doesn't return a value, making it more efficient for simply outputting content.