**The Jargon of Internet**

The Internet is full with the jargon’s . Let understand these jargon’s in layman language.

### **Understanding the Internet's Working with HTTP and More : Using Indian Postal System Analogy**

#### **1. HTTP (Hypertext Transfer Protocol) - Post Office Example**

As we discussed earlier, HTTP acts like the **Post Office**. It ensures that your "letter" (request) is sent from your browser to the right **destination** (web server) and that the "reply" (website content) reaches your screen.

#### **2. TLS Certificate - Postman’s Authentication**

Imagine a postman who needs to prove he’s trustworthy before delivering an important letter. He shows his **ID card** to the sender to assure them that the letter won’t be tampered with along the way.

Similarly, the **TLS Certificate** (Transport Layer Security) ensures that the communication between your browser and the server is secure. It acts like a **digital ID** for websites, confirming that the site you’re visiting is legitimate and that the data you send and receive is encrypted, keeping it safe from hackers.

When a website uses **HTTPS** (the secure version of HTTP), it means there is an active **TLS certificate** ensuring that all the information sent between your device and the website is encrypted, like a **sealed envelope**.

#### **3. IP Address - The Post Address**

In the world of the postal system, every house has a unique address so the postman knows exactly where to deliver letters. Similarly, every device and server connected to the internet has a unique **IP address** (Internet Protocol address).

When you request a website, the **IP address** is like the address of the website’s server. Your browser needs to know the server’s **IP address** in order to send the request to the right place, just like the postman needs the correct address to deliver a letter.

#### **4. User Agent - Your Personal Identification**

Now, think about when you send a letter and write your name on the envelope. This helps the receiver know who sent it. In the digital world, when your browser sends a request to a web server, it includes a **User Agent**.

The **User Agent** is a piece of information that tells the server **what kind of device** and **browser** you are using. For example, whether you’re browsing the website from a phone, tablet, or computer. It’s like writing down "I’m sending this letter from my mobile phone" on the envelope. This helps the server customize the response accordingly (like showing a mobile-friendly version of the website).

#### **5. Methods - The Type of Service**

When you send a letter, you can choose what kind of service you want—whether it’s a regular letter, a package, or a registered letter. Similarly, when you make a request on the internet, you can choose different **HTTP methods** to define what action you want to take.

Some common HTTP methods include:

* **GET**: This is like asking the postman, “Can you send me a copy of this letter?” You’re requesting information from the server.
* **POST**: This is like sending a letter to someone. You’re providing information to the server, like submitting a form.
* **PUT**: This method is like updating a letter that you already sent. It’s used to update existing data on the server.
* **DELETE**: This method is like telling the post office to remove a letter or package. It’s used to delete something from the server.

Each **HTTP method** is like a different kind of postal service depending on what you want to do—receive, send, update, or remove information.

#### **6. TCP - Reliable Delivery System**

Now, imagine that the **Post Office** has a very reliable system where it makes sure that each letter is safely delivered without missing any part of the content, and if anything goes wrong, the postman will deliver the letter again. This **reliable delivery system** is what **TCP (Transmission Control Protocol)** does in the digital world.

TCP ensures that the data you send over the internet is **delivered accurately** and in the right order. It divides the data into small packets, sends them to the server, and then reassembles them at the destination. If any part of the data gets lost or corrupted along the way, TCP makes sure to **re-send** it until everything reaches its correct destination.

### **Putting It All Together:**

Let’s combine everything into one big process:

1. **You (The User)** send a **HTTP request** from your browser, just like posting a letter.
2. The request goes through the **internet**, with the help of **IP addresses**, just like a letter traveling through the postal system to the correct address.
3. If you’re visiting a secure website, the **TLS certificate** makes sure the communication is safe and private, like the postman showing ID before delivering important documents.
4. The **User Agent** in the request tells the server what device you're using, just like writing "sent by mobile" on the envelope.
5. The **server** receives your request and knows what action to take based on the **HTTP method**—whether it’s to send back information, update something, or delete it.
6. The server sends back the website content in small **TCP packets**, and they’re reassembled in the correct order, just like the post office ensuring your letter or package is delivered properly.

### **Conclusion:**

HTTP is like the **Post Office** that handles the delivery of your requests and the responses from servers. With the help of **TLS certificates**, **IP addresses**, **User Agents**, **HTTP Methods**, and **TCP**, this process becomes secure, reliable, and efficient. Each component plays a special role in ensuring your experience on the internet is smooth and safe, just like a letter being properly delivered to its destination.