TCP is a layer 4 core communication protocol within the internet protocol which ensures reliable, ordered, and error-checked delivery of data between devices. When two devices establish a TCP connection, they perform a three-way handshake to confirm each other's presence and agree on parameters for data exchange. TCP breaks information into packets, sends them, and then ensures all packets arrive in the correct order. If any packets are lost or damaged during transmission, TCP automatically requests them to be re-sent. This approach makes TCP ideal for applications where data accuracy is more important than speed, such as browsing web pages, sending emails, and downloading files because users receive complete and correctly sequenced information.It is better than UDP but due to these features, it has an additional overhead. Also, application protocols like HTTP and FTP use it. User Datagram Protocol (UDP) is a layer 4 communication protocol used in the internet's network layer, transport layer, and session layer. Unlike TCP it sends data as independent packets called datagrams without first establishing a dedicated connection. This means UDP does not guarantee delivery, order, or error correction, it simply sends data and hopes it arrives. Because it skips these checks, UDP has very low overhead and latency which makes it ideal for applications where speed is more important than perfect reliability. Examples include live video streaming, online gaming, and voice calls, where a few missed packets are often less noticeable than the delay that comes from waiting for perfect delivery.