The transmission control protocol (TCP) is defined as a connection-oriented communication protocol that allows computing devices and applications to send data via a network and verify its delivery, forming one of the crucial pillars of the global internet. Communication programs and computing devices utilize TCP for exchanging messages over a network. The task of this protocol is to carry packets across the Internet and ensure the successful delivery of messages and data across networks. Before one can send any data, the client and server must establish a connection. The server must actively listen for client requests whenever a connection is established. The TCP protocol is connection-based, so it creates and maintains a connection between the receiver and the sender while the data is being passed between them. Therefore, any information that travels through the internet is guaranteed to arrive unaltered.However, while TCP is an instinctively reliable protocol, these feedback mechanisms also result in a more significant overhead size. This means it will consume significantly more of the bandwidth available on your system. Most online applications use the user datagram protocol (UDP) in conjunction with TCP to work around this issue.User datagram protocol (UDP) is a message-oriented communication protocol that allows computing devices and applications to send data via a network without verifying its delivery, which is best suited to real-time communication and broadcast systems. As with TCP, its purpose is to send and receive messages, so its functioning is similar to the transmission control protocol. What is distinctive about UDP is that it is not connection-based. In this case, “connectionless” refers to the fact that no connection is established before communication occurs. Furthermore, it does not ensure the delivery of the data packets from the server. It is commonly referred to as the “fire-and-forget” protocol because it is not concerned about whether or not the client receives the data. In most cases, UDP is faster than TCP because it does not assure delivery of the packets as TCP does. The UDP protocol is not suitable for sending electronic mail, viewing a web page, or downloading a file. However, it is preferred mainly for real-time applications like broadcasting or multitasking network traffic.