#	Layer	Description	PDU	Protocols
7	**Application**	Layer provides services directly to the user. This layer contains all the network applications, such as web browsers, email clients, and file transfer utilities.	Data	HTTP (Hypertext Transfer Protocol), FTP (File Transfer Protocol), SMTP (Simple Mail Transfer Protocol), POP3 (Post Office Protocol version 3), IMAP (Internet Message Access Protocol), DNS (Domain Name System).
6	**Presentation**	Layer is responsible for the presentation and formatting of data. It translates data from the application layer into a format that can be transmitted over the network.	Data	TLS/SSL (Transport Layer Security/Secure Sockets Layer), MIME (Multipurpose Internet Mail Extensions), JPEG (Joint Photographic Experts Group), ASCII (American Standard Code for Information Interchange).
5	**Session**	Layer sets up, manages, and terminates sessions between applications. It also manages the dialogue between the applications.	Data	NetBIOS (Network Basic Input/Output System), RPC (Remote Procedure Call), SQL (Structured Query Language).
4	**Transport**	Layer is responsible for providing reliable, end-to-end delivery of data. It ensures that data is sent and received in the correct order and without errors.	Segments	TCP (Transmission Control Protocol), UDP (User Datagram Protocol), SCTP (Stream Control Transmission Protocol).
3	**Network**	Layer is where routing takes place. It's responsible for creating logical paths for data to travel from the source to the destination. It also adds logical addressing information to the data.	Packets	IP (Internet Protocol), ICMP (Internet Control Message Protocol), IGMP (Internet Group Management Protocol), OSPF (Open Shortest Path First), BGP (Border Gateway Protocol).
2	**Datalink**	Layer is responsible for organizing bits into frames and adding physical addressing information to them. It also handles error detection and correction.	Frames	ARP (Address Resolution Protocol), PPP (Point-to-Point Protocol), SLIP (Serial Line Internet Protocol), MAC (Media Access Control).
1	**Physical**	Layer deals with the physical aspects of network communication, such as cables, connectors, and signals. Its main function is to transmit raw bits over a communication channel.	Bits	Ethernet, Wi-Fi, Bluetooth, USB, RS-232, RS-485.