**Layer 7 (Application layer)**

* Sending emails
* Browsing the web
* Getting the current time from a remote site
* Sending an instant message

Application software is not the same as the application layer.

It is rather a UI to interact with the application layer.

**Layer 6 (Presentation Layer)**

Id computers use different encoding techniques, the presentation layer will convert the outgoing request to the server’s encoding technique, and then return the data to the sender using its encoding technique.

**Layer 5 (Session Layer)**

This layer initialises a session, maintains it then terminates it.

It is in charge of re-establishing the connection if it goes down by providing the nesse4sary credentials. If the connection is expensive to maintain, it should disconnect the session when there is no activity on the network.

**Layer 4 (Transport Layer)**

This layer is responsible for providing the end to end connection for the higher layer to pass data through.

Reliability is not a requirement and is sometimes not preferred, eg. If a small amount of a voice chat gets lost, it would take more effort to recover the small amount than to just continue and let the human fill in the blank.

**Layer 3 (Network Layer)**

The network layer, situated as Layer 3 in the OSI model, orchestrates communication between various networks in a complex interconnected system. When you access a website like the university's Computer Science site from home, your data traverses through multiple networks, such as your home network, your ISP's network, the university's network, and potentially networks of other ISPs. The network layer, through routing, establishes the route for data packets from your browser to the server and back. This can involve techniques like pathfinding packets or routing tables, which specify the next router in the path. Each network device, like routers, manages multiple interfaces connecting different networks. Routing depends on destination identification, typically through addresses like IP addresses. Routing tables may be manually configured or automated through protocols like RIP. Ultimately, the network layer ensures efficient and reliable data transmission across diverse networks, forming the backbone of internet connectivity.

**Layer 2 (Data link Layer)**

The data link layer is in charge of finding the start and end of a message as well as some added error checking in the message, it then verifies that the data has been successfully transferred by recalculating the error detection code.

**Layer 1 (Physical Layer)**

The physical connection between 2 points.