



# Computer Networks I

3<sup>rd</sup> stage

**Lecture No. 7**

**OSI Model**

**Presentation -session Layer**

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# *THE OSI MODEL*

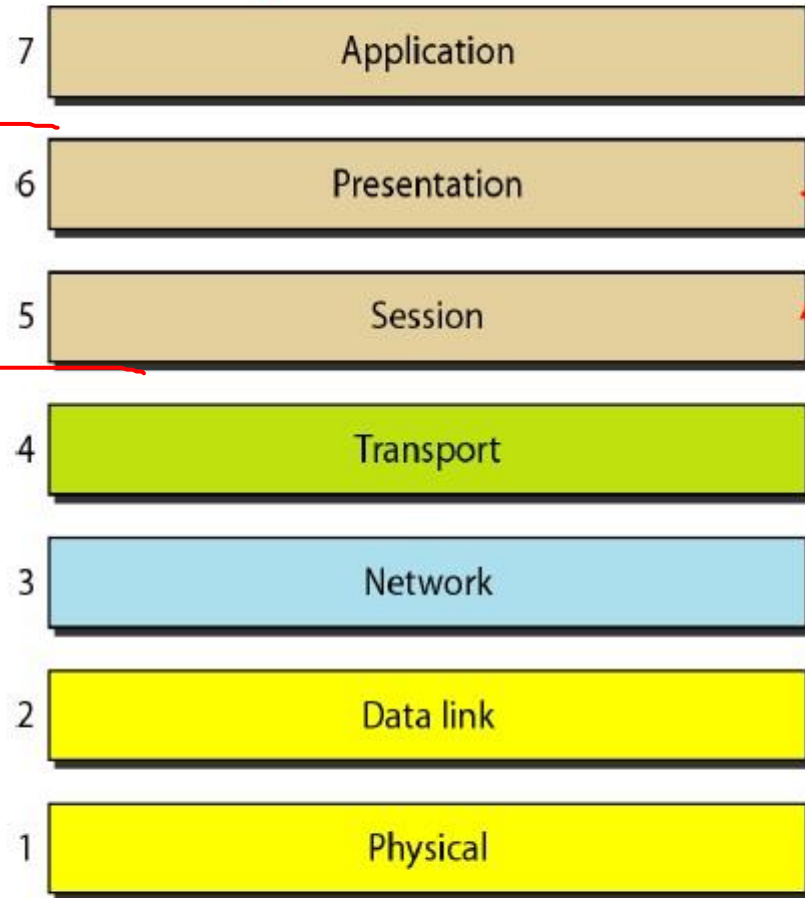
Established in 1947, the International Standards Organization (**ISO**) is a multinational body dedicated to worldwide agreement on international standards. An ISO standard that covers all aspects of network communications is the Open Systems Interconnection (**OSI**) model. It was first introduced in the late 1970s.

*Note:*

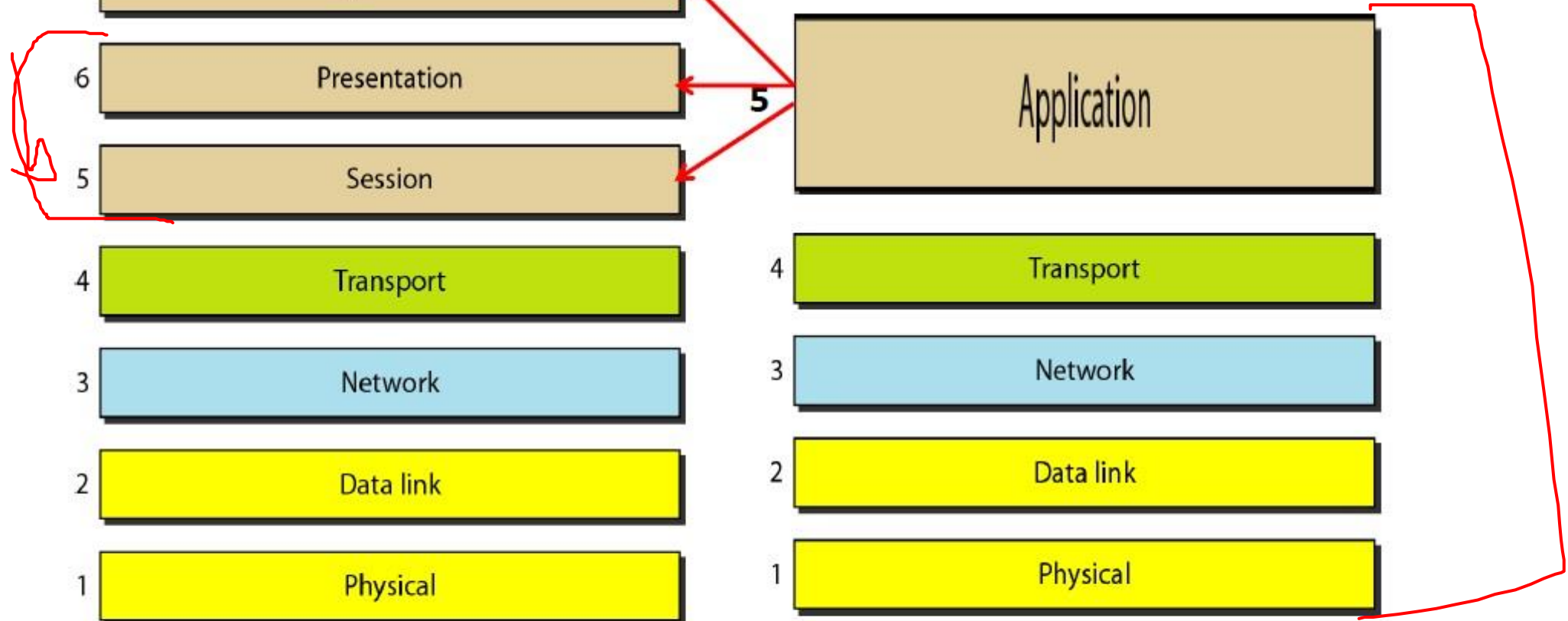
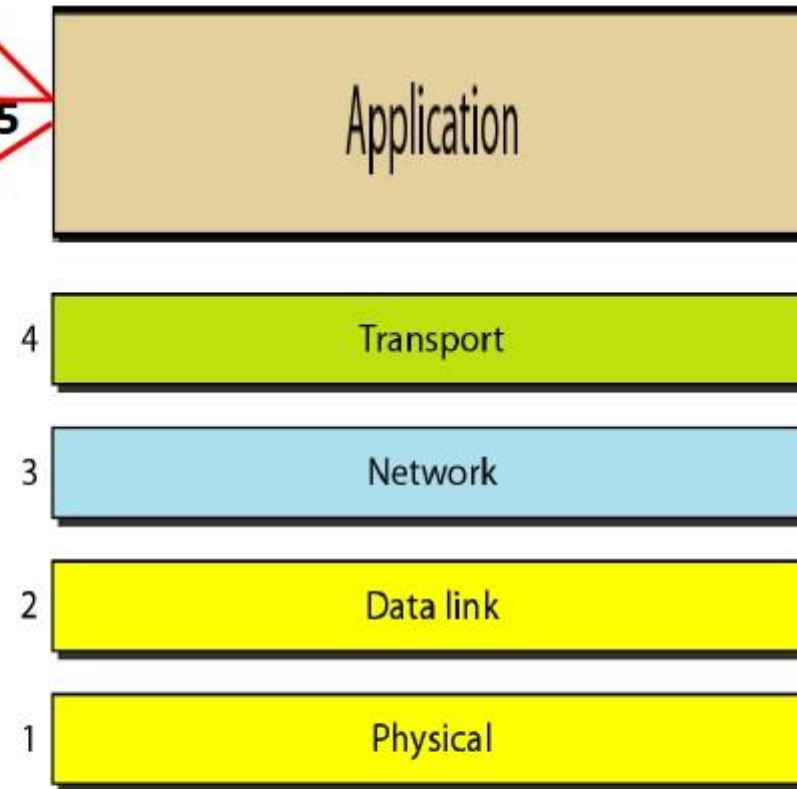
**ISO is the organization.  
OSI is the model.**

# OSI and TCP/IP network models

## Seven layers of the OSI model

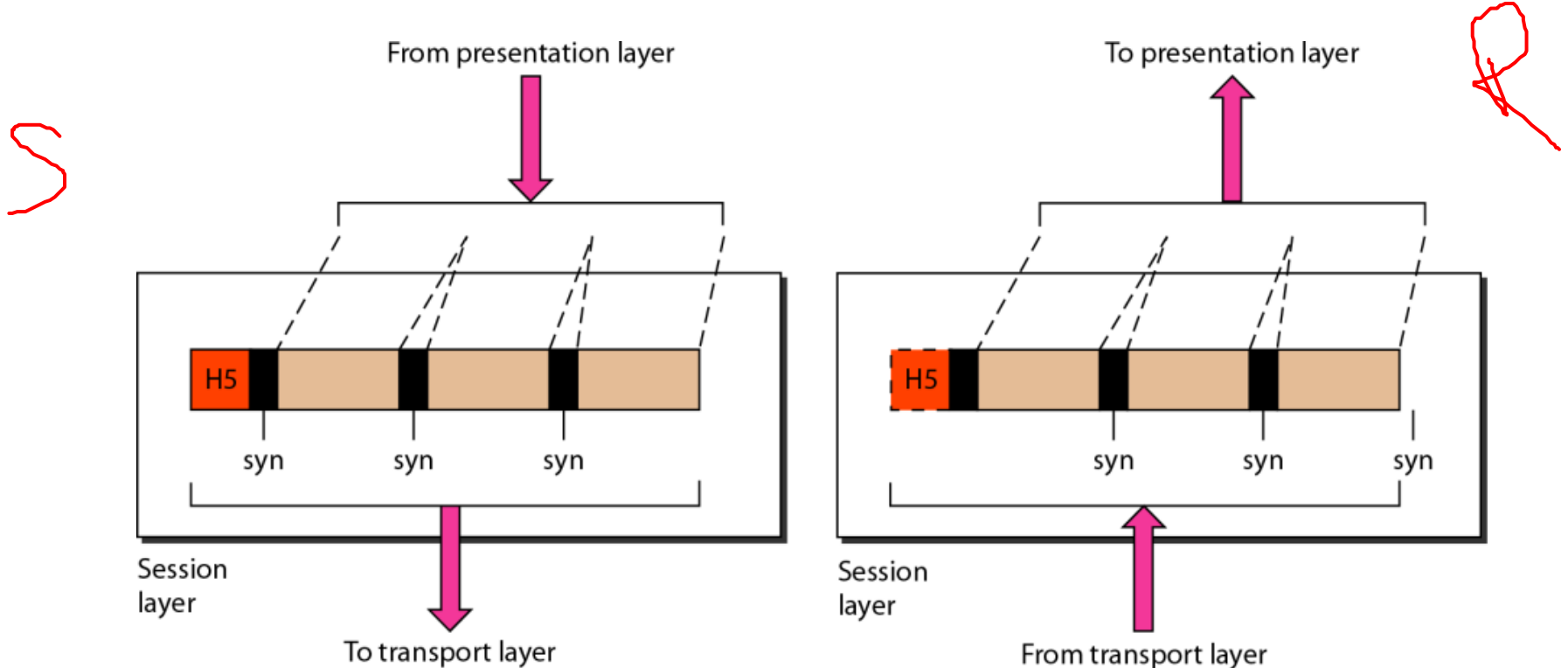


## Five layers of TCP/IP



# The session layer

The session layer is responsible for **dialog control** and **synchronization**



# *Duties of Session layer*

## **1. Dialog control:**

Allows two systems to enter into dialog. It allows communication between two processes in either half or full duplex.

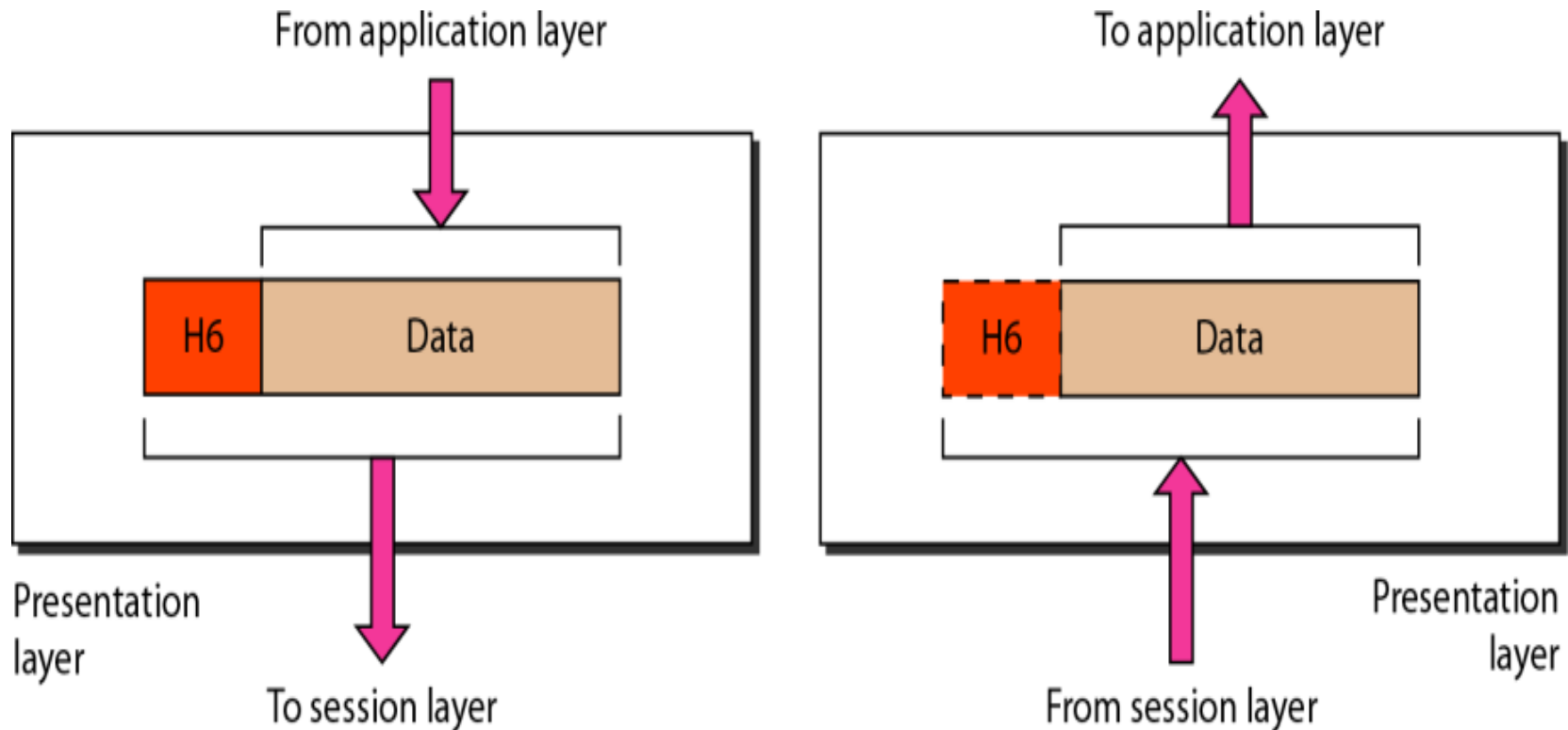
## **2. Synchronization (Recovery)**

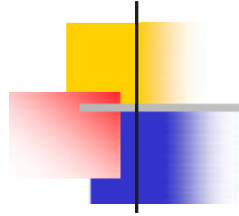
Allow a process to add check points (**Synchronization point**) into a stream of data . So that if a failure of some sort occurs between checkpoints, the layer can retransmit all data since the last checkpoint.

# *Presentation layer*

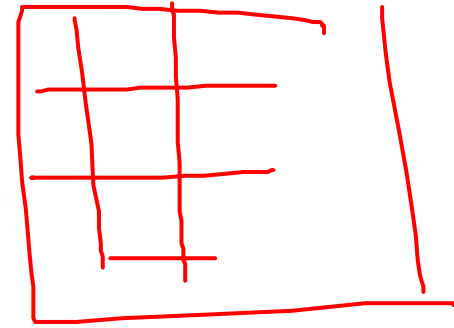
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**The presentation layer is concerned with the syntax and semantics of the information exchanged between two systems**





OST



**Note**

format

The presentation layer is responsible for translation, compression, and encryption.

## *Duties of presentation layer*



### **1. Translation**

At the sender it changes the information from its sender – dependent format into common format. At receiving, changes the common format into its receiver-dependent format

### **2. Encryption-Decryption**

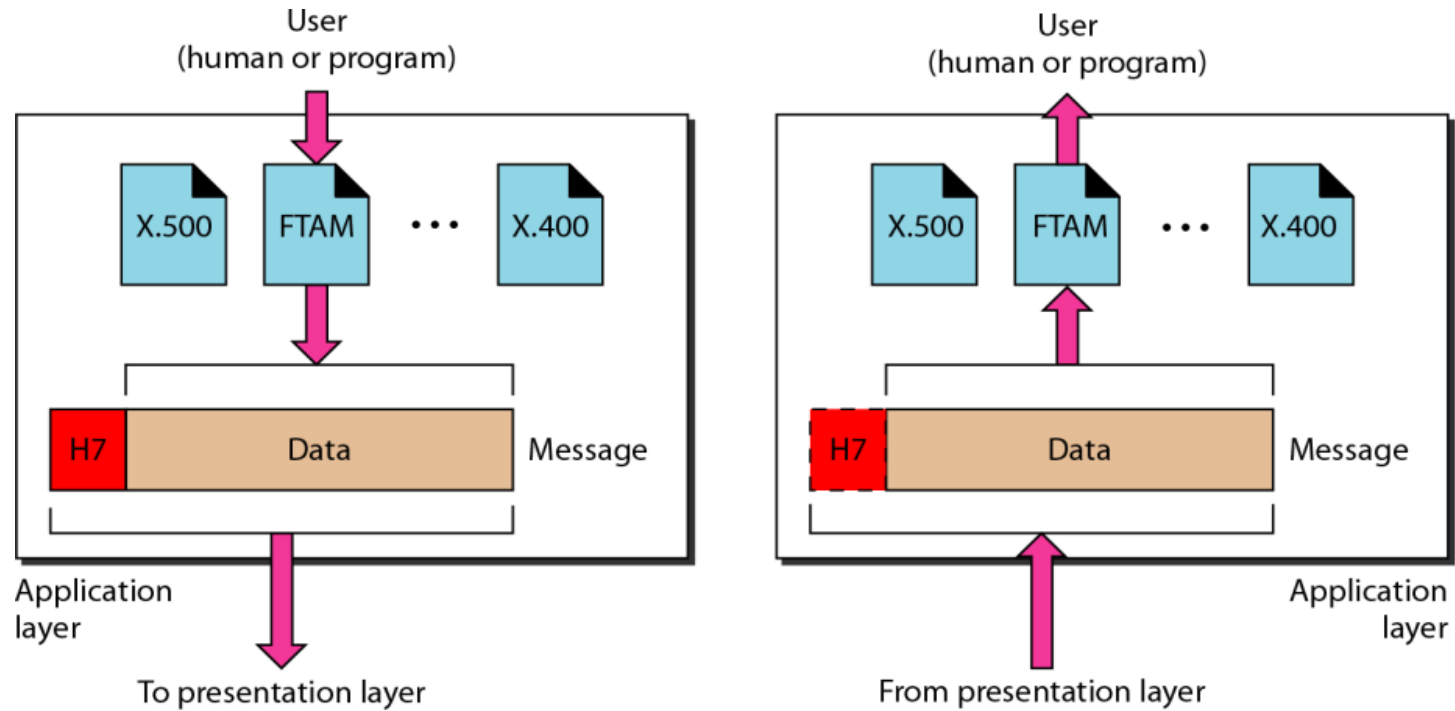
To ensure privacy and security

### **3. Compression**

Data compression reduces the number of bits contained in the information. It is important in the transmission of multimedia such as audio or video



# Application layer



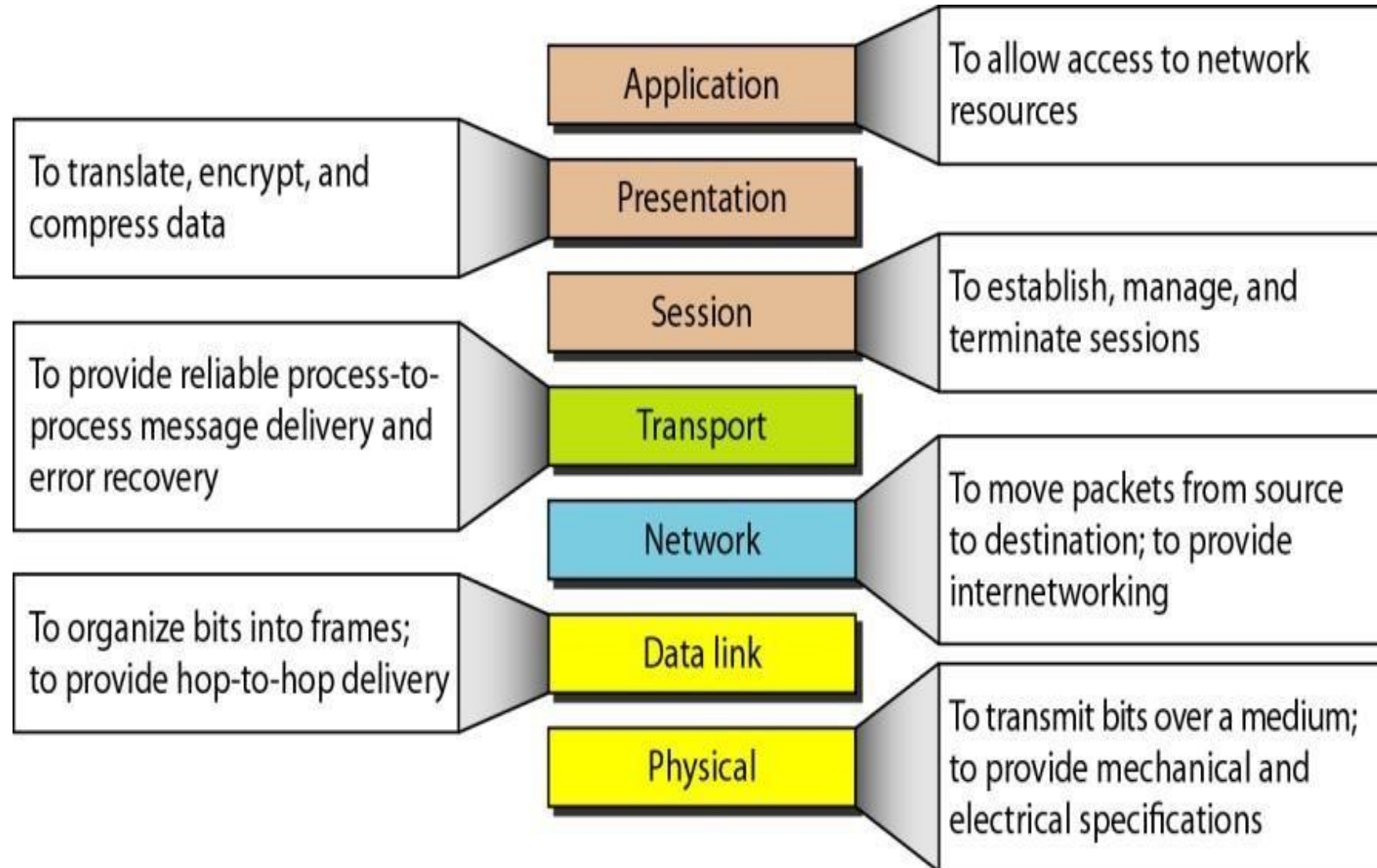
**The application layer is responsible for providing services to the user.**

# OSI Model

	Layer	Data Unit	Function
<p>TCP</p> <p>User support layer</p>	Application	DATA	Access to Network Resources
	Presentation		Data representation: translate compress and encryption
	Session		Controls the dialogues , Establishes, manages and terminates the connections between the local and remote application
Link	Transport	Segment	End-to-end connections and reliability
<p>Network support layer</p>	Network	Datagram/ <u>Packet</u>	Path determination (Routing) and logical Addressing
	Data link	Frame	Hop to Hop delivery and Physical addressing
	Physical	Bit	Media, signal and binary transmission,...

# Summary of layers

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*Thank you for listening*

*Taqwa Altameemi*