

IFT 259 Introduction to Internet Networking

Lab 1 OSI Model & TCP/IP Model

Note: If possible, try to complete this lab where you have to multiple computers on the same network

OSI & TCP/IP Models

OSI model comparison with TCP/IP model

- In column 2, indicate the proper name for each of the seven layers of the OSI model corresponding to layer number.
- List the TCP/IP layer number and its name in the next two columns.
- List the PDU for each layer for both models.

OSI Layer #	OSI Layer Name	TCP/IP Layer #	TCP/IP Layer Name	OSI PDU Unit	TCP/IP PDU Unit
7	Application	5-7	Application	Data	Message
6	Presentation	5-7	Application	Data	Message
5	Session	5-7	Application	Data	Message
4	Transport	4	Transport	Segment	Segment
3	Network	3	Internet	Packet	Datagram
2	Data Link	2	Link	Frame	Frames
1	Physical	1	Link	Bit	Bit

OSI Model from top to bottom

- In column 2, indicate the proper name for each of the seven layers of the OSI model corresponding to the layer number
- Give a mnemonic word for each layer that can help you remember it.
- List the keywords and describe the characteristics of each layer.

Layer #	Layer Name	Mnemonic (Memory Jogger)	Keywords & Description of each layer
7	Application	All	Type of communication
6	Presentation	people	Encryption, data conversion
5	Session	scem	start, stop, maintain
4	Transportation	To	Ensure delivery of entire file or message
3	Network	Need	Routes data to different LANs and WANs
2	Data Link	Data	Transmit packets from node to node
1	Physical	Processing	Electrical signals & cabling

OSI Model (more stuff)

- In column 2, indicate the proper name for each of the seven layers of the OSI model corresponding to the layer number
- List the PDU for each layer
- List devices (if applicable) that operate at each layer.

Layer #	Layer Name	PDU Unit	Devices that operate at this level
7	Application	Data	—
6	Presentation	Data	—
5	Session	Data	—
4	Transportation	Segment	—
3	Network	Packet	Router
2	Data Link	Frame	Switch, Bridge
1	Physical	Bit	Hub, Repeater

OSI Model Characteristics Exercise → Match the following terms to the appropriate OSI model layer

