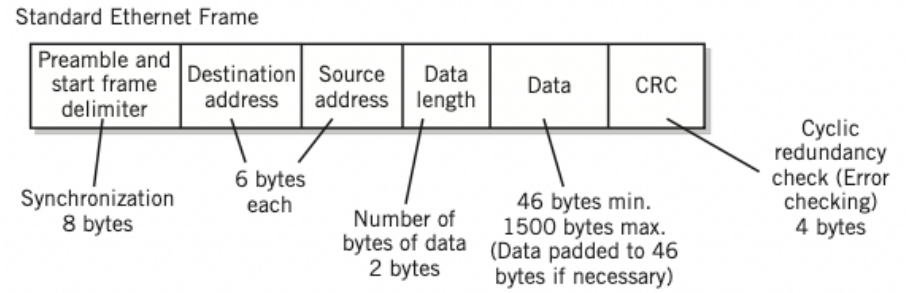
Exercise 1 Chapter 13:
In the Ethernet frame described in the text (figure 13.5 page # 410), what are the minimum and the maximum number of bytes?

Answer:



From the above picture,

Preamble and start frame delimiter	= 8 bytes
Destination address	= 6 bytes
Source address	= 6 bytes
Data length	= 2 bytes
Data field	= 46 bytes (Min.) or 1,500 bytes (Max.)
CRC	= 4 bytes

Therefore,
The minimum number of bytes = 8 + 6 + 6 + 2 + 46 + 4 = 72 bytes
The maximum number of bytes = 8 + 6 + 6 + 2 + 1,500 + 4 = 1,526 bytes

Exercise 2 Chapter 13:
Suppose a higher layer application wants to send a file 12MB in size across an Ethernet LAN. How many Ethernet frames are needed? Assume the largest Ethernet payload is 1500 bytes.

Answer:

File size	= 12 MB = 12 x 1,048,576 bytes = 12,582,912 bytes
Ethernet payload	= 1,500 bytes
Total Ethernet frames needed	= 12,582,912 / 1,500
	= 8,388.608
	= 8,389 frames