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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?

Ans: Preamble and start frame delimiter = 8

Destination and source MAC address = 12

The Payload minimum = 46

CRC = 4

Number of data byte = 2

The minimum number of bytes = 46+8+4+2+12 = 72 Bytes.

Preamble and start frame delimiter = 8

Destination and source MAC address = 12

Payload maximum = 1500

CRC = 4

Number of data byte = 2

The maximum number of bytes = 1500+8+4+2+12 = 1526 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.

Ans: To send 12MB of data that must be crack down into Ethernet frames holding 1500 Bytes. The File = 12*1,048,576 Bytes = 12,582,912 Bytes.

Number of Ethernet frames in need = 12,582,912 / 1500 = 8389 Ethernet Frames