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ITCS 3166-051

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**Ex3andEx5Chp3**

**Exercise 3-Chapter 3**

The following data fragment occurs in the middle of a data stream for which the byte stuffing algorithm described in the text is used: A B ESC C ESC FLAG FLAG D. What is the output after stuffing?

* The output after stuffing would be A B ESC ESC C ESC ESC ESC FLAG ESC FLAG D
* After the data is received the data would be destuffed to get back to the original data that was sent.

**Exercise 5-Chapter 3**

One of your classmates, Scrooge, has pointed out that it is wasteful to end each frame with a flag byte and then begin the next one with a second flag byte. One flag byte could do the job as well, and a byte saved is a byte earned. Do you agree?

* If we were living in an ideal world where the stream is always continuous and there is no lag then yes the idea would save time and save a byte, but since we are not in an ideal world it could incorporate more errors than problems solved. For example if the interval between the first and second frame is very long, having only one flag could cause the receiver to be in confusion of whether the first byte has finished transmitting or not. Having both FLAGS will let the receiver know for sure that a byte has finished transmitting and the next byte will come in soon.