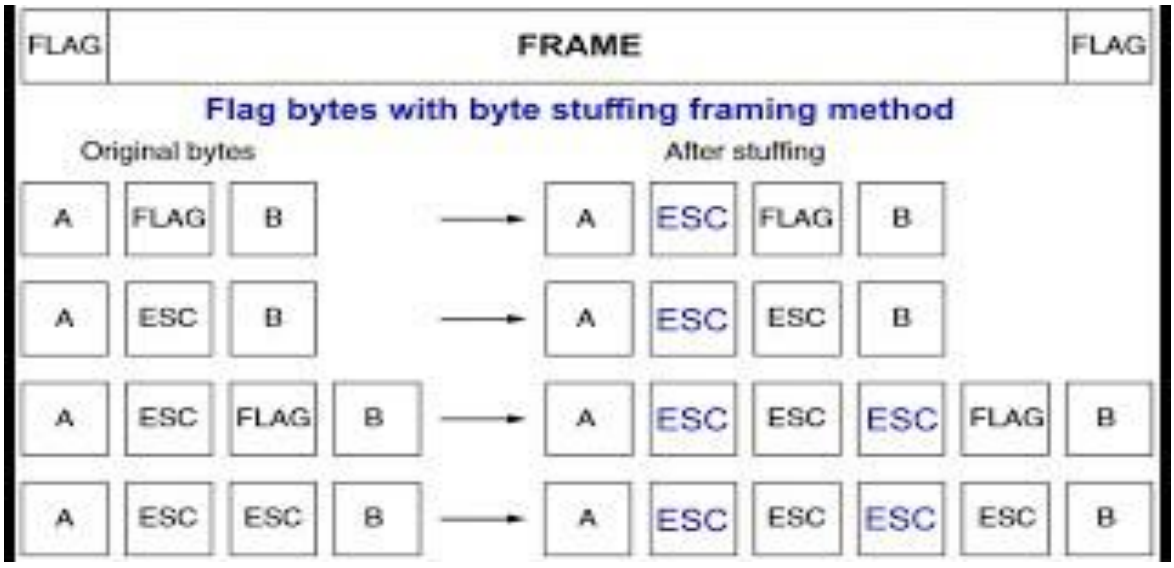
Flag Bytes with Byte Stuffing

In Data Link layer, the stream of bits from physical layer are divided into data frames. The data frames can be of fixed length or variable length. In variable – length framing, the size of each frame to be transmitted may be different. So, a pattern of bits is used as a delimiter to mark the end of one frame and the beginning of the next frame. However, if the pattern occurs in the message, then mechanisms needs to be incorporated so that this situation is avoided.

So in this case Flag bytes with byte stuffing framing method will support.

1. ***In this method a flag byte, is used as both the starting and ending of a frame. See in the figure below.***
2. ***Two consecutive flag bytes indicate the end of one frame and the start of the next frame.***
3. ***If the receiver ever loses synchronization it can just search for two flag bytes to find the end of the current frame and the start of the next frame.***



- **If the pattern of the flag byte is present in the message byte, there should be a strategy so that the receiver does not consider the pattern as the end of the frame. In character – oriented protocol, the mechanism adopted is byte stuffing.**

- **In byte stuffing, a special byte called the escape character (ESC) is stuffed before every byte in the message with the same pattern as the flag byte. If the ESC sequence is found in the message byte, then another ESC byte is stuffed before it.**

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