CHAPTER 20

Remote Login: TELNET and SSH

Exercises

1. The pattern is:

```
11110011 00111100 11111111 11111111
```

Note that the last byte is duplicated because it is the same as IAC; it must be repeated to be interpreted as data.

3. To do the task in Exercise 1, we need to send:

Client to Server: IAC DO BINARY (3 bytes)

Server to Client: IAC WILL BINARY (3 bytes)

Client to Server: `11110011 00111100 11111111 11111111` (4 bytes)

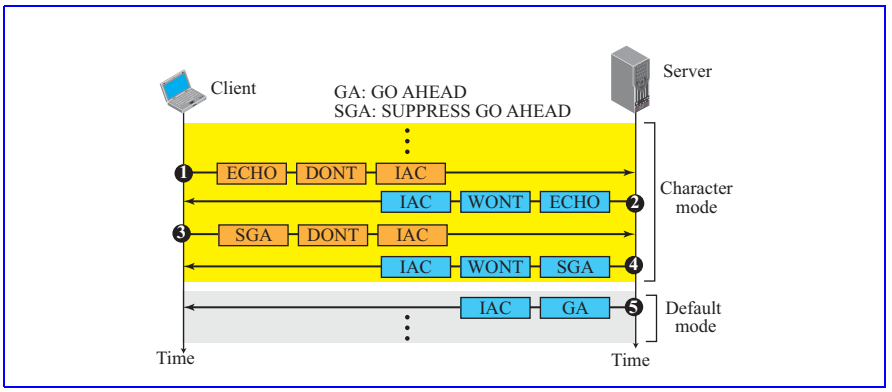
If each transmission is encapsulated in a single TCP segment with 20 bytes of header, there will be 3 segments of 23, 23, and 24 bytes for the total of **70** bytes or **560** bits.

5. If we assume the useful bits are the 3 bytes of data from Exercise 1:

(3 bytes of data) / (216 transmitted bytes) ≈ **1:70** ≈ **1.42** percent

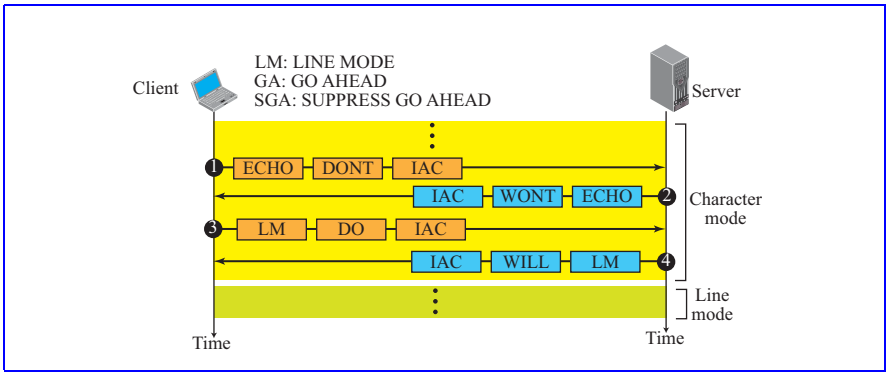
7. See Figure 20.E7.

Figure 20.E7 *Solution to Exercise 7*



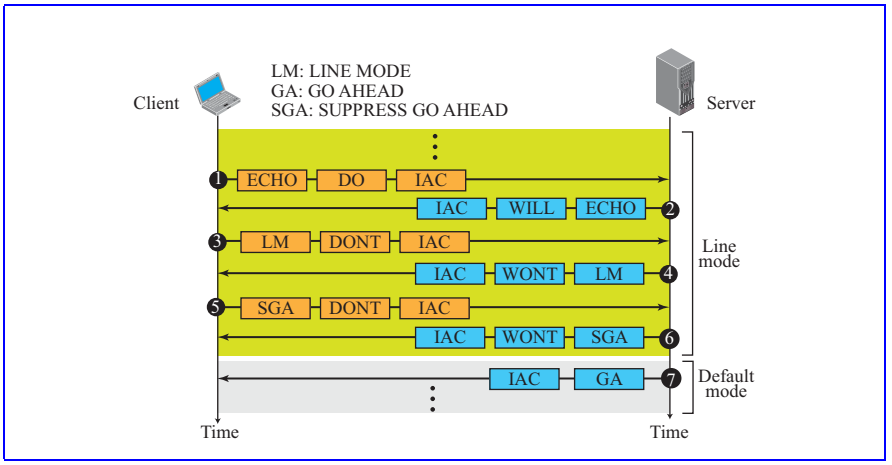
9. See Figure 20.E9.

Figure 20.E9 *Solution to Exercise 9*



11. See Figure 20.E11.

Figure 20.E11 *Solution to Exercise 11*



13. One of the common client/server remote login program is called *putty.*The client *putty* program can be freely downloaded and installed on your local computer. If the remote server that you have account on is using the *putty* server program, you can easily use this software. It provides both SSH, TELNET.