

Tutorial 4

Question 1

A UDP segment (header + data) is represented in hexadecimal 6660 5555 8F0C. Calculate the checksum and represent it in hexadecimal.

Question 2

Suppose a router has 4 links, and packets are to be forwarded as follows:

Destination address range	Link interface
11100000 00000000 00000000 00000000 through 11100000 00111111 11111111 11111111	0
11100000 01000000 00000000 00000000 through 11100000 01000000 11111111 11111111	1
11100000 01000001 00000000 00000000 through 11100001 01111111 11111111 11111111	2
11100001 10000000 00000000 00000000 through 11100001 11111111 11111111 11111111	3
otherwise	3

Find the link interface for datagrams with the following destination addresses.

11001000 10010001 01010001 01010101
11100001 01000000 11000011 00111100
11100001 10000000 00010001 01110111

Question 3

Consider sending a 2400-byte datagram into a link that has an MTU of 700 bytes.

- (a) How many fragments are generated?
- (b) What are the values in the fragment offset field?