Tutorial 8

Question 1

Suppose Host A sends Host B a TCP segment. When Host B receives the datagram, how does the network layer in Host B know it should pass the segment to TCP rather than to UDP?

Question 2

How to ensure that a datagram is forwarded through no more than N routers?

Question 3

A network with 3 routers connected as a triangle. Each router links with a number of hosts and forms a subnet. The subnets with hosts are A, B, and C. The subnets without hosts are D, E, and F.

(a) Assign network addresses to each of these 6 subnets with the following constraints:

all addresses must be allocated from 214.97.254/23

subnet A should have enough addresses to support 250 interfaces

subnet B should have enough addresses to support 120 interfaces

subnet C should have enough addresses to support 120 interfaces

subnets D, E, and F should each be able to support 2 interfaces

(b) Using your answer in part (a), provide the forwarding tables for each of the 3 routers.