Tasks to be accomplished in Weeks 10 and 11 (11/6 - 11/19):

1. Read textbook Chapter 6 (skip math formula).
2. In Discussion Board forum for this time period, answer the following questions by clicking on the reply link for the questions:
   a. Please describe briefly the architecture of Virtual Private Network (VPN) and its constituent technology components that we learnt in this course. (Please use your own language, and limit the length of your answer to half a page or so. You could provide important reference after your answer to back up yours, but you should clearly mark the end of your answer so the readers can safely skip the rest; reference hyperlink is preferred).
   b. Describe briefly how the public-key mechanism is used to support the secret key distribution and management in IPSec (Please use your own language, and limit the length of your answer to half a page or so. You could provide important reference after your answer to back up yours, but you should clearly mark the end of your answer so the readers can safely skip the rest; reference hyperlink is preferred).
   c. Use DOS command “tracert” (trace route) to find the largest number of packet hops to reach any IP (Web) site in the world that you know. (For example, to find out how many hops it takes for packets to move from home to www.yahoo.com, I opened a DOS window and typed command “tracert www.yahoo.com”). This is not a competition, but it will let us have a good idea how far the Internet is spreading out, what kind of communication delays we should expect, and our IT security is depending on how many security links between each pair of adjacent routers (IP security is only as strong as the weakest link along the path).
3. Take an open-book quiz 5 in Blackboard Course Documents from 9am of November 17 to 10pm of November 19. You must complete your quiz within one hour in a single session. Make sure you don’t leave the quiz Web page during your quiz session, and you click on the Submit button at the end of your session. If accidents happen and you cannot access your quiz again, send me an email and I will reset the quiz for you. All the quiz questions are conceptual, and they check your understanding of the topics covered in the recent two weeks and whether you have completed the assigned tasks for the time period.

Important concepts/terms worth attention:

IPSec, virtual private network (VPN), IP security architecture, encapsulated security payload (ESP), authentication header (AH), key management, security associations, security parameter index (SPI), anti-replay window, path MTU, transport mode, and tunnel mode.