

FIT1005
Networks and Data Communications
Tutorial and LAN Laboratory – Week 7

Objective of this tutorial:

The main purpose of this tutorial is to make students reflect on the main points highlighted in each of the questions and get them to construct useful meanings from what they already know. In the revision questions, students are expected to get a clearer understanding in some of the concepts discussed during the lecturer.

How to participate in the tutorial:

The LAN laboratory will be conducted concurrently with the question exercises. Each group will have the opportunity to complete the LAN exercise on a set of computers. As each group will be cycled through this process, you are expected to work on the questions below while waiting for your turn.

Form groups of four students in each and discuss the answers for the following reflective questions with the group members. After spending about 10-15 minutes for each question, discussing with group members, discuss your solutions with the tutor and other groups. The tutor will provide feedback on your solutions.

Revision questions:

1. A damaged acknowledgement is a situation that could occur in stop-and-wait flow control. How could this problem be overcome?
2. A Damaged frame is a situation that could occur in go-back-n ARQ. How could this problem be resolved?

Reflective questions:

1. For very high data rates, for very long distances between sender and receiver, stop-and-wait flow control provides inefficient line utilisation. Discuss this issue and identify advantages and disadvantages of stop-and-wait flow control.
2. The sliding window flow control mechanism requires maintaining a sequence number to identify each frame transmitted. Discuss the numbering system and the impact of different scenarios on sliding window flow control.