

CZ3006/CSC302 : Net - Centric Computing

Assignment 1

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**Listing**

SWP.java - sending and receiving of text files

PFrame.java

**Tasks**

1. Full-duplex data communication

A full-duplex communication utilizes the bandwidth by allowing both the sender and receiver to send and transmit at the same time. The sender will be able to receive an acknowledgement for the previous frame sent.

1. In-order delivery of packets to the network-layer

In-order delivery of packets means that the frames are received in the correct order as they were sent. Frames could get lost or damaged along the way. When a situation like this occurs, frames will be resent in order to allow the frames to be received in the correct order.

1. Selective repeat retransmission strategy

When the frames are received in the wrong order, a retransmission of the missing or damaged frame will be required. A timeout will be triggered after the negative acknowledgement is sent out.

1. Synchronization with the network-layer by granting credits.

The number of credits is actually on the receiver’s window size. The number

1. Negative acknowledgement.

If the packet is sent and not received by the recipient, a negative acknowledgement will be piggy backed back to the sender. When time out occurs, or the negative acknowledgement is received, the missing frame will be retransmitted.

6. Separate acknowledgment when the reverse traffic is light or none