Ex:6.a

STOP AND WAIT PROTOCOL

Simulate Stop and Wait Protocol using socket programming

Sender should perform the following:

1. Read 16 bit data from user.
2. Divide the data into n frames and number as frame0, frame1 etc.
3. Do parity check for each frame and combine the parity with each frame.
4. Transmit the frames one after another.
5. When the sender receives an ack within timeout, transmit the next frame. If not retransmit the same frame.

Receiver should do the following:

1. Receive the frames from the sender.
2. Verify the sequence number of the frames to identify whether the receiver is receiving the expected frame. If not, discard the frame and transmit a NAK to the sender
3. If received properly transmit an ACK.

Sample Input Output

Sender Side

Enter 16 bit data:1010100011010000

Frame0 – 1010 – 0

Frame1 – 1000 -1

Frame0 – 1101-1

Frame1 – 0000- 0

Sending Frame0– 1010 – 0

Do you want to introduce error 1. Yes 2. No: 2

Receiving ACK1

Sending Frame1 – 1000 -1

Do you want to introduce error 1. Yes 2. No: 2

1

Introduce error in which position: 2

Sending Frame1 – 1100 -1

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Receiver Side

Receiving Frame0– 1010 – 0

No error in frame0

Transmitting ACK1

Receiving Frame1 – 1100 -1

Error in data
Transmitting NACK1

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