**Assignment 6**

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**Title:** **Write a program to simulate Go back N Sliding Window Protocol in peer-to-peer mode. (attach PDF contains the description of the Go back N and Selective Repeat Protocols, Program and output)**

**Theory:**

Go-Back-N Automatic Repeat request (ARQ) is a protocol used for reliable data transmission in the data link layer of computer networks. Operating on a sliding window principle, it allows the sender to transmit multiple frames before receiving acknowledgments from the receiver. The window size determines the number of unacknowledged frames allowed. If a frame is lost or corrupted, the entire window, starting from the problematic frame, is retransmitted.

The receiver sends acknowledgments containing information about the next expected frame, facilitating sender-side tracking. A timer mechanism triggers frame retransmission if acknowledgments are not received within a specified time. While efficient in stable network conditions, Go-Back-N ARQ may face inefficiencies in environments with frequent frame losses. Overall, it offers a straightforward yet effective approach to ensuring data reliability in point-to-point communication scenarios.

**Program:**

if \_\_name\_\_ == "\_\_main\_\_":

    windowSize = **int**(**input**("Enter number of frames "))

    currentFrame = 0

    ack = 0

    while(True):

        for idx in **range**(windowSize):

**print**(f"Frame {currentFrame} transmitted")

            currentFrame+=1

            if(currentFrame ==  windowSize):

                break

        ack = **int**(**input**("Enter acknowledgement of received frame"))

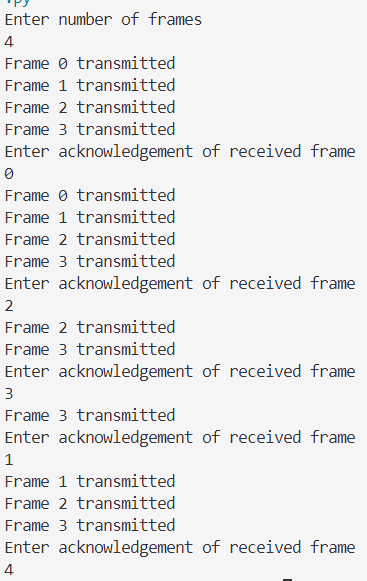
        if(ack == windowSize):

            break

        else:

            currentFrame = ack

**Output:**

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