

SLIDING WINDOW PROTOCOL:

GBN
SR

$$\sum d = n \\ A = n+1$$

$$\sqrt{T_f} = 2 \text{ ms}, T_p = 44 \text{ ms}$$

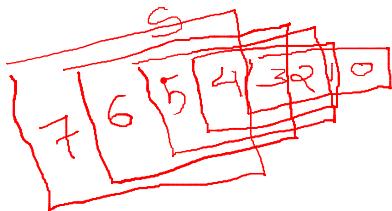
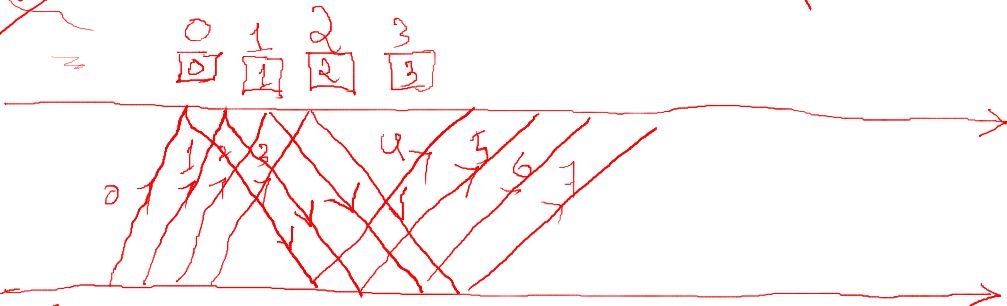
GBN

4-Packets

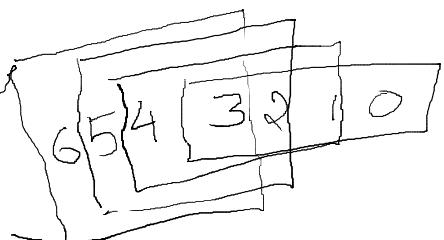
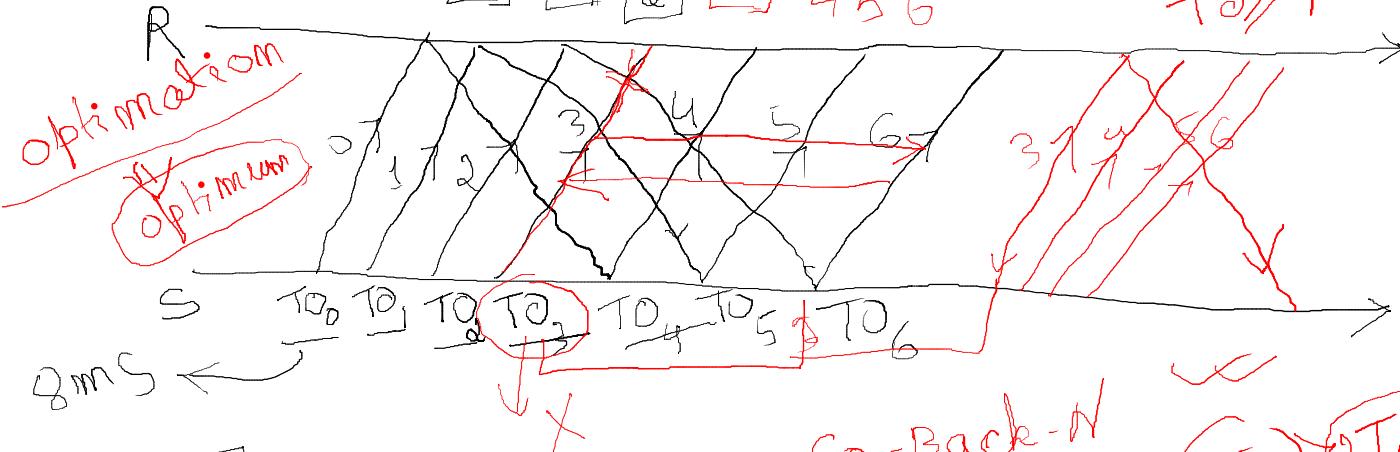
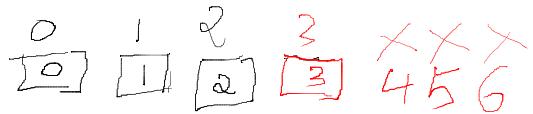
3210

Pipelining

WR = 1



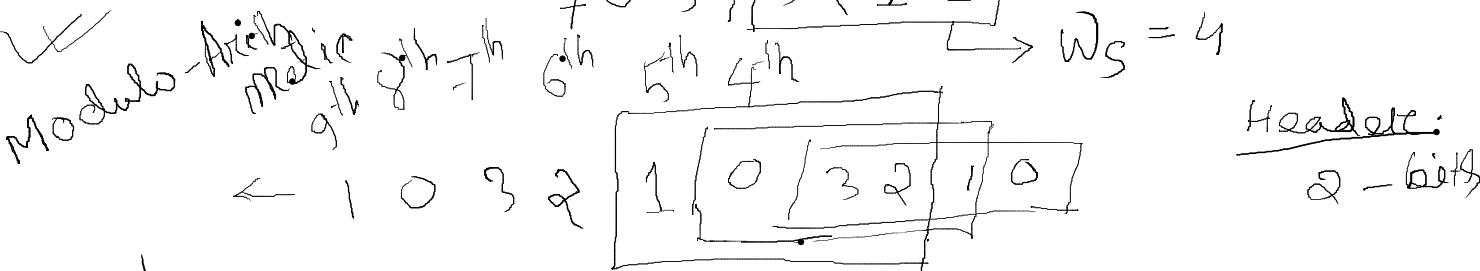
Codel:



Go-Back-N =



SEQUENCE NO:



GBN

4 3 2 1 0 4 3 2 1 0 4 3 2 1 0

Window Size $W_S = N$

$\lceil \log_2 (W_S + 1) \rceil \rightarrow \text{No. of Seq}^n \text{ mo } > N + 1 \quad W_S + 1$

Q3N

Given: $T_f = 2 \text{ ms}$, $T_p = 48 \text{ ms}$

{ Calculate the minimum no. of bits required for Seq^n no field in the Header [$W_R = 1$]

$$\Rightarrow W_S = 1 + 2a = 1 + 2 \cdot \frac{T_p}{T_f}$$

$$\text{bits} = \lceil \log_2 (W_S + 1) \rceil = \lceil \log_2 50 \rceil = 1 + 2 \cdot \frac{48}{2} = 1 + 48 = 49$$

($W_S \neq N$)

GB4

No. of Segm no = 4 [..-3 2 1 0]

shift and st
5 1 3 2



W+1

N+1

GBN

3 2 1 0

Cf



GBN
1

$W_S = N$
↑
Sender Window Size

$W_R = 1^M$
↑
Receiver Window Size

Min^m no. of Seqⁿ no = $(N + 1)$

Min no. of Seq no = $(N + M)$

$W_S + W_R$

$(N + M)$
 $(W_S + W_R)$

A red line drawing of a brain-like structure, possibly a hippocampus, showing internal gyri and sulci. To its right are small blue line drawings of a brain slice, a single neuron, and a dendrite.

$$G_{\text{BZ}} \Rightarrow \omega_0 = 1$$

$$SP = WR = M$$

13
No. 1
Season 1
14
 $(S + W)$
15
 (P)
16
Min.

$$w_s = 16$$

$$\Rightarrow \omega_p = 1$$

Min m

Sea

3

2

2

2-bit

= 9