Expt. No: 7

SLIPING WINDOW

Date: 419

AIMI Write a program to implement flow control at data lonk layer using stideng window protocol

- 1. Input wendow singe and nursage from user
- 2. Devide message -> 1 character = | frame with [frame no., DATA]
- 3. sender weite frames to sender_Buffer. +xt t. sender waits for ACK by reading Receiver_ Buffer. +xt
- 5. If correct ACK > send next wondow, else ef NACK -> resend same wondow
- 6. Receiver reads frames from sender-Buffer. +xit
- 7. If frame numbers are correct -> write ACK to Receiver Buffer , tit
- 8. If error > corête NACK to Recurer Buffer, +xd
- 9. Repeat until all frames are sent successfully
- 10. Eurors can be tested by manually editary frame no. / Ack in the Arles

patero me some son best min

```
code: sender, py
 import time
 msq = input l'Enter message: ")
 win = i'nd l'input l'Enter wendow singe: "))
 frames = [[[i, ch] for i, ch in enumeratelneg]]
   ptr = 0
   while ptr < len (frames):
        wondow = frames [ptr: ptr+ wn]
       with open ("sender Buffer. +xt" "w") as f.
          for to in whidow
               f. wrote (f "strcozy Ercizy /n")
        ( enabyla " sente" ) thered
       time: sleep (2)
       try: he temps = / (an) + m to
          with open (" receiver Buffer. tot") as of:
ack, no = f. stead L). Splet ()
             no = mt lno)
  ( SICR CEPES: F XXX" For elinear.
      (desay of some A") to
       ex ack = = "Ack" and no = = ptr + len (window):
   pronto ( Ack received ")
       to pto+ = won
       Chse:
                       FUNE THEFT (F)
         pront l" NACK received > Resending ....
```

```
ty whas it
succeiver, py
  import tome
 expected=0
   while True : was all the state of the state 
   try:
                               with open ("sender Buffer. tet") as of.
                                          lines = f. readlines c
                 except:
                                        tome. sleep (1); continue
                  ey not lines:
                                         tome, sup(1); continue
       OK = True
                         for line in level:
                                       no, data = lene, strup(). Splot ()
                                       of mut (no) ! = expected.
                       ok = False, break capacted + = 1
                with open ("Receiver-Buffer. txt", "w") as f:
                of ok:
                                              f. write (f "ACK & expected ?")
                                                    prient ("ACK", expected)
                                       else
                                     f. woult (f"NACK & expectedy")
                                                print ("NACK" capected)
```

tome. Heep (2)

output:

25/P/11 12500

sender output:

Enter message: MELLO

Enter wondow size 3 1 1 1 1 1

sent : [[0, 'H'], [1, 'E'], [2, 'L]

The House Helder Res

ACK received

sent [[3, 'L'], [4, '0']]

Ack received

a local cap bout sound a sugar lacity Received outputing gov has a god of me

ACK 3

ACK 5/11 Wearing & all live syen

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Marriar Fination of the - 1 th - 1 th I the I the I the I the experient burdlen not too umound

principal the stand was africtioned

successed and in

Program to emplement from control using wendow Protocol was successfully apabilette3 executed.

13/9/26