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1 D:\anaconda\envs\wzy\python.exe D:/\pi\bar{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\
       &SR/sr_test.py
  2 Alice send message 0 to ('127.0.0.1', 49577).
  3 Message: Alice
  4 Bob send message 0 to ('127.0.0.1', 49575).
  5 Message: Bob0
  6 Bob send ack message 0 to ('127.0.0.1', 49576).
  7 Alice receive ACK message ACK 0
  8 Alice send message 1 to ('127.0.0.1', 49577).
  9 Message: EOF
10 Bob send ack message 1 to ('127.0.0.1', 49576).
11 AliceEOFAlice receive ACK message ACK 1
12
13 666
14
15 ############
16 Finally Bob recevied message:
17 Alice
18 #############
19
20 Alice lose packet 0.
21 Bob send message 1 to ('127.0.0.1', 49575).
22 Message: Bob1
23 Alice send ack message 1 to ('127.0.0.1', 49578).
24 Bob receive ACK message ACK 1
25 Bob send message 2 to ('127.0.0.1', 49575).
26 Message: Bob2
27 Alice send ack message 2 to ('127.0.0.1', 49578).
28 Bob receive ACK message ACK 2
29 Bob send message 3 to ('127.0.0.1', 49575).
30 Message: Bob3
31 Alice send ack message 3 to ('127.0.0.1', 49578).
32 Bob receive ACK message ACK 3
33 Bob send message 4 to ('127.0.0.1', 49575).
34 Message: Bob4
35 Sender Alice end.
36 Alice lose packet 4.
37 Bob send message 5 to ('127.0.0.1', 49575).
38 Message: Bob5
39 Alice lose packet 5.
40 Bob timeout on pkt 0.
```

- File sr test 41 Bob resend message 0 to ('127.0.0.1', 49575). 42 Message: MSG 0 Bob0 43 Alice send ack message 0 to ('127.0.0.1', 49578). 44 Bob receive ACK message ACK 0 45 Bob send message 6 to ('127.0.0.1', 49575). 46 Message: Bob6 47 Alice send ack message 6 to ('127.0.0.1', 49578).Bob receive ACK message ACK 6 48 49 Bob send message 7 to ('127.0.0.1', 49575). 50 Message: Bob7 51 Alice send ack message 7 to ('127.0.0.1', 49578). 52 Bob lose ack packet 7. 53 Bob send message 8 to ('127.0.0.1', 49575). 54 Message: Bob8 55 Alice send ack message 8 to ('127.0.0.1', 49578). 56 Bob lose ack packet 8. 57 Bob send message 9 to ('127.0.0.1', 49575). 58 Message: Bob9 59 Alice lose packet 9. 60 Bob timeout on pkt 4. 61 Bob resend message 4 to ('127.0.0.1', 49575). 62 Message: MSG 4 Bob4 63 Bob timeout on pkt 5. 64 Bob resend message 5 to ('127.0.0.1', 49575). 65 Message: MSG 5 Bob5 66 Alice send ack message 4 to ('127.0.0.1', 49578). 67 Bob receive ACK message ACK 4 68 Bob send message 10 to ('127.0.0.1', 49575). 69 Message: EOF 70 Alice send ack message 5 to ('127.0.0.1', 49578). 71 Bob receive ACK message ACK 5 72 Alice lose packet 10. 73 Bob timeout on pkt 7. 74 Bob resend message 7 to ('127.0.0.1', 49575). 75 Message: MSG 7 Bob7 76 Bob timeout on pkt 8. 77 Alice have received packet 7, resend ACK message ACK
- 78 Bob resend message 8 to ('127.0.0.1', 49575).
- 79 Message: MSG 8 Bob8

7 to ('127.0.0.1', 49578).

```
80 Bob receive ACK message ACK 7
 81 Alice have received packet 8, resend ACK message ACK
     8 to ('127.0.0.1', 49578).Bob receive ACK message
    ACK 8
 82 Bob timeout on pkt 9.
 83
 84 Bob resend message 9 to ('127.0.0.1', 49575).
 85 Message: MSG 9 Bob9
 86 Alice send ack message 9 to ('127.0.0.1', 49578).
 87 Bob receive ACK message ACK 9
 88 Bob timeout on pkt 10.
 89 Bob resend message 10 to ('127.0.0.1', 49575).
 90 Message: MSG 10 EOF
 91 Alice lose packet 10.
 92 Bob timeout on pkt 10.
 93 Bob resend message 10 to ('127.0.0.1', 49575).
 94 Message: MSG 10 EOFAlice lose packet 10.
 95
 96 Bob timeout on pkt 10.
97 Bob resend message 10 to ('127.0.0.1', 49575).
98 Message: MSG 10 EOF
99 Alice send ack message 10 to ('127.0.0.1', 49578).
100 Bob0 Bob1 Bob2 Bob3 Bob4 Bob5 Bob6 Bob7 Bob8 Bob9
   E0F
101 666
102
103 #############
104 Finally Alice recevied message:
105 Bob0 Bob1 Bob2 Bob3 Bob4 Bob5 Bob6 Bob7 Bob8 Bob9
106 ############
107
108 Bob receive ACK message ACK 10
109 Sender Bob end.
110
```