```
1 C:\Users\zyn66\CLionProjects\Protocol_5\cmake-build-debug\Protocol_5.exe
 2 Packets:
3 Packet 1: A
                                 Packet 2: B
4 Packet 3: C
                                 Packet 4: D
5 Packet 5: E
                                 Packet 6: F
6 Packet 7: G
                                 Packet 8: H
7 Packet 9: I
                                 Packet 10: J
8 Packet 11: K
                                Packet 12: L
9 Packet 13: M
                                Packet 14: N
10 Packet 15: 0
                                Packet 16: P
11 Packet 17: Q
12 Frames:
13 Frame 1: Kind: 0 Seq: 0 Ack: 0 Data: A
14 Frame 2: Kind: 0 Seq: 1 Ack: 0
15 Frame 3: Kind: 0 Seq: 2 Ack: 0 Data: C
16 Frame 4: Kind: 0 Seq: 3 Ack: 0 Data: D
17 Frame 5: Kind: 0 Seq: 4 Ack: 0
18 Frame 6: Kind: 0 Seq: 5 Ack: 0 Data: F
19 Frame 7: Kind: 0 Seq: 6 Ack: 0 Data: G
20 Frame 8: Kind: 0 Seq: 7 Ack: 0 Data: H
21 Frame 9: Kind: 0 Seq: 8 Ack: 0 Data: I
22 Frame 10: Kind: 0 Seq: 9 Ack: 0 Data: J
23 Frame 11: Kind: 0 Seq: 10 Ack: 0 Data: K
24 Frame 12: Kind: 0 Seq: 11 Ack: 0 Data: L
25 Frame 13: Kind: 0 Seq: 12 Ack: 0 Data: M
26 Frame 14: Kind: 0 Seq: 13 Ack: 0 Data: N
27 Frame 15: Kind: 0 Seq: 14 Ack: 0 Data: 0
28 Frame 16: Kind: 0 Seq: 15 Ack: 0 Data: P
29 Frame 17: Kind: 0 Seq: 16 Ack: 0 Data: Q
30 [TRANSMITTER]: Enable Network layer
31 [TRANSMITTER]: Receiving Packet From Network Layer: Data=A
32 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=0, Ack=0, Data=A
33 [TRANSMITTER]: Start Timer for sequence number 0
34 [TRANSMITTER]: Start Acknowledge Time for sequence 0
35 [EVENT]: Frame Arrival
36 [TRANSMITTER]: Receiving Packet From Network Layer: Data=B
37 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=1, Ack=0, Data=B
38 [TRANSMITTER]: Start Timer for sequence number 1
39 [TRANSMITTER]: Start Acknowledge Time for sequence 1
40 [EVENT]: Frame Arrival
41 [TRANSMITTER]: Receiving Packet From Network Layer: Data=C
42 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=2, Ack=0, Data=C
43 [TRANSMITTER]: Start Timer for sequence number 2
44 [TRANSMITTER]: Start Acknowledge Time for sequence 2
45 [EVENT]: Frame Arrival
46 [TRANSMITTER]: Receiving Packet From Network Layer: Data=D
47 [TRANSMITTER]: Sending Frame To Physical Layer: Seg=3, Ack=0, Data=D
48 [TRANSMITTER]: Start Timer for sequence number 3
49 [TRANSMITTER]: Start Acknowledge Time for sequence 3
50 [EVENT]: Frame Arrival
51
52 Waiting for event...
54 [RECEIVER]: Receiving Frame From Physical Layer: Seq=0, Ack=0, Data=A
55 [EVENT]: Frame Arrival
56 [RECEIVER]: Data 0 Received
57 [RECEIVER]: Sending Packet To Network Layer: Data=A
58 [TRANSMITTER]: End Acknowledge Time for sequence 0
59 [TRANSMITTER]: End Timer for sequence number 0
```

```
60 [RECEIVER]: Receiving Frame From Physical Layer: Seg=1, Ack=0, Data=B
 61 [EVENT]: Frame Arrival
 62 [RECEIVER]: Data 1 Received
 63 [RECEIVER]: Sending Packet To Network Layer: Data=B
 64 [TRANSMITTER]: End Acknowledge Time for sequence 1
 65 [TRANSMITTER]: End Timer for sequence number 1
 66 [RECEIVER]: Receiving Frame From Physical Layer: Seq=2, Ack=0, Data=C
 67 [EVENT]: Frame Arrival
 68 [RECEIVER]: Data 2 Received
 69 [RECEIVER]: Sending Packet To Network Layer: Data=C
 70 [TRANSMITTER]: End Acknowledge Time for sequence 2
 71 [TRANSMITTER]: End Timer for sequence number 2
 72 [RECEIVER]: Receiving Frame From Physical Layer: Seg=3, Ack=0, Data=D
 73 [EVENT]: Frame Arrival
 74 [RECEIVER]: Data 3 Received
 75 [RECEIVER]: Sending Packet To Network Layer: Data=D
 76 [TRANSMITTER]: End Acknowledge Time for sequence 3
 77 [TRANSMITTER]: End Timer for sequence number 3
 79 [TRANSMITTER]: Enable Network layer
 80 [TRANSMITTER]: Receiving Packet From Network Layer: Data=E
 81 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=4, Ack=0, Data=E
 82 [TRANSMITTER]: Start Timer for sequence number 4
 83 [TRANSMITTER]: Start Acknowledge Time for sequence 4
 84 [EVENT]: Frame Arrival
 85 [TRANSMITTER]: Receiving Packet From Network Layer: Data=F
 86 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=5, Ack=0, Data=F
 87 [TRANSMITTER]: Start Timer for sequence number 5
 88 [TRANSMITTER]: Start Acknowledge Time for sequence 5
 89 [EVENT]: Time out Error
 90 [TRANSMITTER]: Receiving Packet From Network Layer: Data=G
 91 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=6, Ack=0, Data=G
 92 [TRANSMITTER]: Start Timer for sequence number 6
 93 [TRANSMITTER]: Start Acknowledge Time for sequence 6
 94 [EVENT]: Frame Arrival
 95 [TRANSMITTER]: Receiving Packet From Network Layer: Data=H
 96 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=7, Ack=0, Data=H
97 [TRANSMITTER]: Start Timer for sequence number 7
98 [TRANSMITTER]: Start Acknowledge Time for sequence 7
99 [EVENT]: Frame Arrival
100
101 Waiting for event...
103 [RECEIVER]: Receiving Frame From Physical Layer: Seq=4, Ack=0, Data=E
104 [EVENT]: Frame Arrival
105 [RECEIVER]: Data 4 Received
106 [RECEIVER]: Sending Packet To Network Layer: Data=E
107 [TRANSMITTER]: End Acknowledge Time for sequence 4
108 [TRANSMITTER]: End Timer for sequence number 4
109 [EVENT]: Time out Error
110 [RECEIVER]: Data 5 not received
112 [TRANSMITTER]: Enable Network layer
113 [TRANSMITTER]: Receiving Packet From Network Layer: Data=F
114 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=5, Ack=0, Data=F
115 [TRANSMITTER]: Start Timer for sequence number 5
116 [TRANSMITTER]: Start Acknowledge Time for sequence 5
117 [EVENT]: Frame Arrival
118 [TRANSMITTER]: Receiving Packet From Network Layer: Data=G
```

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119 [TRANSMITTER]: Sending Frame To Physical Layer: Seg=6, Ack=0, Data=G
120 [TRANSMITTER]: Start Timer for sequence number 6
121 [TRANSMITTER]: Start Acknowledge Time for sequence 6
122 [EVENT]: Checksum Error
123 [TRANSMITTER]: Receiving Packet From Network Layer: Data=H
124 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=7, Ack=0, Data=H
125 [TRANSMITTER]: Start Timer for sequence number 7
126 [TRANSMITTER]: Start Acknowledge Time for sequence 7
127 [EVENT]: Checksum Error
128 [TRANSMITTER]: Receiving Packet From Network Layer: Data=I
129 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=8, Ack=0, Data=I
130 [TRANSMITTER]: Start Timer for sequence number 8
131 [TRANSMITTER]: Start Acknowledge Time for sequence 8
132 [EVENT]: Frame Arrival
133
134 Waiting for event...
136 [RECEIVER]: Receiving Frame From Physical Layer: Seq=5, Ack=0, Data=F
137 [EVENT]: Frame Arrival
138 [RECEIVER]: Data 5 Received
139 [RECEIVER]: Sending Packet To Network Layer: Data=F
140 [TRANSMITTER]: End Acknowledge Time for sequence 5
141 [TRANSMITTER]: End Timer for sequence number 5
142 [EVENT]: Checksum Error
143 [RECEIVER]: Data 6 not received
145 [TRANSMITTER]: Enable Network layer
146 [TRANSMITTER]: Receiving Packet From Network Layer: Data=G
147 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=6, Ack=0, Data=G
148 [TRANSMITTER]: Start Timer for sequence number 6
149 [TRANSMITTER]: Start Acknowledge Time for sequence 6
150 [EVENT]: Frame Arrival
151 [TRANSMITTER]: Receiving Packet From Network Layer: Data=H
152 [TRANSMITTER]: Sending Frame To Physical Layer: Seg=7, Ack=0, Data=H
153 [TRANSMITTER]: Start Timer for sequence number 7
154 [TRANSMITTER]: Start Acknowledge Time for sequence 7
155 [EVENT]: Frame Arrival
156 [TRANSMITTER]: Receiving Packet From Network Layer: Data=I
157 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=8, Ack=0, Data=I
158 [TRANSMITTER]: Start Timer for sequence number 8
159 [TRANSMITTER]: Start Acknowledge Time for sequence 8
160 [EVENT]: Checksum Error
161 [TRANSMITTER]: Receiving Packet From Network Layer: Data=J
162 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=9, Ack=0, Data=J
163 [TRANSMITTER]: Start Timer for sequence number 9
164 [TRANSMITTER]: Start Acknowledge Time for sequence 9
165 [EVENT]: Checksum Error
166
167 Waiting for event...
168
169 [RECEIVER]: Receiving Frame From Physical Layer: Seq=6, Ack=0, Data=G
170 [EVENT]: Frame Arrival
171 [RECEIVER]: Data 6 Received
172 [RECEIVER]: Sending Packet To Network Layer: Data=G
173 [TRANSMITTER]: End Acknowledge Time for sequence 6
174 [TRANSMITTER]: End Timer for sequence number 6
175 [RECEIVER]: Receiving Frame From Physical Layer: Seq=7, Ack=0, Data=H
176 [EVENT]: Frame Arrival
177 [RECEIVER]: Data 7 Received
```

```
178 [RECEIVER]: Sending Packet To Network Layer: Data=H
179 [TRANSMITTER]: End Acknowledge Time for sequence 7
180 [TRANSMITTER]: End Timer for sequence number 7
181 [EVENT]: Checksum Error
182 [RECEIVER]: Data 8 not received
184 [TRANSMITTER]: Enable Network layer
185 [TRANSMITTER]: Receiving Packet From Network Layer: Data=I
186 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=8, Ack=0, Data=I
187 [TRANSMITTER]: Start Timer for sequence number 8
188 [TRANSMITTER]: Start Acknowledge Time for sequence 8
189 [EVENT]: Time out Error
190 [TRANSMITTER]: Receiving Packet From Network Layer: Data=J
191 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=9, Ack=0, Data=J
192 [TRANSMITTER]: Start Timer for sequence number 9
193 [TRANSMITTER]: Start Acknowledge Time for sequence 9
194 [EVENT]: Frame Arrival
195 [TRANSMITTER]: Receiving Packet From Network Layer: Data=K
196 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=10, Ack=0, Data=K
197 [TRANSMITTER]: Start Timer for sequence number 10
198 [TRANSMITTER]: Start Acknowledge Time for sequence 10
199 [EVENT]: Checksum Error
200 [TRANSMITTER]: Receiving Packet From Network Layer: Data=L
201 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=11, Ack=0, Data=L
202 [TRANSMITTER]: Start Timer for sequence number 11
203 [TRANSMITTER]: Start Acknowledge Time for sequence 11
204 [EVENT]: Checksum Error
205
206 Waiting for event...
207
208 [TRANSMITTER]: End Acknowledge Time for sequence 8
209 [TRANSMITTER]: Receiving Packet From Network Layer: Data=I
210 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=8, Ack=0, Data=I
211 [TRANSMITTER]: Start Timer for sequence number 8
212 [TRANSMITTER]: Start Acknowledge Time for sequence 8
213 [EVENT]: Frame Arrival
214 [TRANSMITTER]: Receiving Packet From Network Layer: Data=J
215 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=9, Ack=0, Data=J
216 [TRANSMITTER]: Start Timer for sequence number 9
217 [TRANSMITTER]: Start Acknowledge Time for sequence 9
218 [EVENT]: Time out Error
219 [TRANSMITTER]: Receiving Packet From Network Layer: Data=K
220 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=10, Ack=0, Data=K
221 [TRANSMITTER]: Start Timer for sequence number 10
222 [TRANSMITTER]: Start Acknowledge Time for sequence 10
223 [EVENT]: Frame Arrival
224 [TRANSMITTER]: Receiving Packet From Network Layer: Data=L
225 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=11, Ack=0, Data=L
226 [TRANSMITTER]: Start Timer for sequence number 11
227 [TRANSMITTER]: Start Acknowledge Time for sequence 11
228 [EVENT]: Frame Arrival
229
230 Waiting for event...
231
232 [RECEIVER]: Receiving Frame From Physical Layer: Seq=8, Ack=0, Data=I
233 [EVENT]: Frame Arrival
234 [RECEIVER]: Data 8 Received
235 [RECEIVER]: Sending Packet To Network Layer: Data=I
236 [TRANSMITTER]: End Acknowledge Time for sequence 8
```

```
237 [TRANSMITTER]: End Timer for sequence number 8
238 [EVENT]: Time out Error
239 [RECEIVER]: Data 9 not received
241 [TRANSMITTER]: Enable Network layer
242 [TRANSMITTER]: Receiving Packet From Network Layer: Data=J
243 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=9, Ack=0, Data=J
244 [TRANSMITTER]: Start Timer for sequence number 9
245 [TRANSMITTER]: Start Acknowledge Time for sequence 9
246 [EVENT]: Checksum Error
247 [TRANSMITTER]: Receiving Packet From Network Layer: Data=K
248 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=10, Ack=0, Data=K
249 [TRANSMITTER]: Start Timer for sequence number 10
250 [TRANSMITTER]: Start Acknowledge Time for sequence 10
251 [EVENT]: Frame Arrival
252 [TRANSMITTER]: Receiving Packet From Network Layer: Data=L
253 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=11, Ack=0, Data=L
254 [TRANSMITTER]: Start Timer for sequence number 11
255 [TRANSMITTER]: Start Acknowledge Time for sequence 11
256 [EVENT]: Frame Arrival
257 [TRANSMITTER]: Receiving Packet From Network Layer: Data=M
258 [TRANSMITTER]: Sending Frame To Physical Layer: Seg=12, Ack=0, Data=M
259 [TRANSMITTER]: Start Timer for sequence number 12
260 [TRANSMITTER]: Start Acknowledge Time for sequence 12
261 [EVENT]: Frame Arrival
262
263 Waiting for event...
264
265 [TRANSMITTER]: End Acknowledge Time for sequence 9
266 [TRANSMITTER]: Receiving Packet From Network Layer: Data=J
267 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=9, Ack=0, Data=J
268 [TRANSMITTER]: Start Timer for sequence number 9
269 [TRANSMITTER]: Start Acknowledge Time for sequence 9
270 [EVENT]: Frame Arrival
271 [TRANSMITTER]: Receiving Packet From Network Layer: Data=K
272 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=10, Ack=0, Data=K
273 [TRANSMITTER]: Start Timer for sequence number 10
274 [TRANSMITTER]: Start Acknowledge Time for sequence 10
275 [EVENT]: Time out Error
276 [TRANSMITTER]: Receiving Packet From Network Layer: Data=L
277 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=11, Ack=0, Data=L
278 [TRANSMITTER]: Start Timer for sequence number 11
279 [TRANSMITTER]: Start Acknowledge Time for sequence 11
280 [EVENT]: Frame Arrival
281 [TRANSMITTER]: Receiving Packet From Network Layer: Data=M
282 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=12, Ack=0, Data=M
283 [TRANSMITTER]: Start Timer for sequence number 12
284 [TRANSMITTER]: Start Acknowledge Time for sequence 12
285 [EVENT]: Frame Arrival
286
287 Waiting for event...
288
289 [RECEIVER]: Receiving Frame From Physical Layer: Seq=9, Ack=0, Data=J
290 [EVENT]: Frame Arrival
291 [RECEIVER]: Data 9 Received
292 [RECEIVER]: Sending Packet To Network Layer: Data=J
293 [TRANSMITTER]: End Acknowledge Time for sequence 9
294 [TRANSMITTER]: End Timer for sequence number 9
295 [EVENT]: Time out Error
```

```
296 [RECEIVER]: Data 10 not received
298 [TRANSMITTER]: Enable Network layer
299 [TRANSMITTER]: Receiving Packet From Network Layer: Data=K
300 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=10, Ack=0, Data=K
301 [TRANSMITTER]: Start Timer for sequence number 10
302 [TRANSMITTER]: Start Acknowledge Time for sequence 10
303 [EVENT]: Time out Error
304 [TRANSMITTER]: Receiving Packet From Network Layer: Data=L
305 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=11, Ack=0, Data=L
306 [TRANSMITTER]: Start Timer for sequence number 11
307 [TRANSMITTER]: Start Acknowledge Time for sequence 11
308 [EVENT]: Checksum Error
309 [TRANSMITTER]: Receiving Packet From Network Layer: Data=M
310 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=12, Ack=0, Data=M
311 [TRANSMITTER]: Start Timer for sequence number 12
312 [TRANSMITTER]: Start Acknowledge Time for sequence 12
313 [EVENT]: Time out Error
314 [TRANSMITTER]: Receiving Packet From Network Layer: Data=N
315 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=13, Ack=0, Data=N
316 [TRANSMITTER]: Start Timer for sequence number 13
317 [TRANSMITTER]: Start Acknowledge Time for sequence 13
318 [EVENT]: Time out Error
319
320 Waiting for event...
321
322 [TRANSMITTER]: End Acknowledge Time for sequence 10
323 [TRANSMITTER]: Receiving Packet From Network Layer: Data=K
324 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=10, Ack=0, Data=K
325 [TRANSMITTER]: Start Timer for sequence number 10
326 [TRANSMITTER]: Start Acknowledge Time for sequence 10
327 [EVENT]: Frame Arrival
328 [TRANSMITTER]: Receiving Packet From Network Layer: Data=L
329 [TRANSMITTER]: Sending Frame To Physical Layer: Seg=11, Ack=0, Data=L
330 [TRANSMITTER]: Start Timer for sequence number 11
331 [TRANSMITTER]: Start Acknowledge Time for sequence 11
332 [EVENT]: Checksum Error
333 [TRANSMITTER]: Receiving Packet From Network Layer: Data=M
334 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=12, Ack=0, Data=M
335 [TRANSMITTER]: Start Timer for sequence number 12
336 [TRANSMITTER]: Start Acknowledge Time for sequence 12
337 [EVENT]: Frame Arrival
338 [TRANSMITTER]: Receiving Packet From Network Layer: Data=N
339 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=13, Ack=0, Data=N
340 [TRANSMITTER]: Start Timer for sequence number 13
341 [TRANSMITTER]: Start Acknowledge Time for sequence 13
342 [EVENT]: Frame Arrival
343
344 Waiting for event...
345
346 [RECEIVER]: Receiving Frame From Physical Layer: Seq=10, Ack=0, Data=K
347 [EVENT]: Frame Arrival
348 [RECEIVER]: Data 10 Received
349 [RECEIVER]: Sending Packet To Network Layer: Data=K
350 [TRANSMITTER]: End Acknowledge Time for sequence 10
351 [TRANSMITTER]: End Timer for sequence number 10
352 [EVENT]: Checksum Error
353 [RECEIVER]: Data 11 not received
354
```

```
355 [TRANSMITTER]: Enable Network layer
356 [TRANSMITTER]: Receiving Packet From Network Layer: Data=L
357 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=11, Ack=0, Data=L
358 [TRANSMITTER]: Start Timer for sequence number 11
359 [TRANSMITTER]: Start Acknowledge Time for sequence 11
360 [EVENT]: Frame Arrival
361 [TRANSMITTER]: Receiving Packet From Network Layer: Data=M
362 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=12, Ack=0, Data=M
363 [TRANSMITTER]: Start Timer for sequence number 12
364 [TRANSMITTER]: Start Acknowledge Time for sequence 12
365 [EVENT]: Frame Arrival
366 [TRANSMITTER]: Receiving Packet From Network Layer: Data=N
367 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=13, Ack=0, Data=N
368 [TRANSMITTER]: Start Timer for sequence number 13
369 [TRANSMITTER]: Start Acknowledge Time for sequence 13
370 [EVENT]: Time out Error
371 [TRANSMITTER]: Receiving Packet From Network Layer: Data=0
372 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=14, Ack=0, Data=0
373 [TRANSMITTER]: Start Timer for sequence number 14
374 [TRANSMITTER]: Start Acknowledge Time for sequence 14
375 [EVENT]: Time out Error
376
377 Waiting for event...
378
379 [RECEIVER]: Receiving Frame From Physical Layer: Seq=11, Ack=0, Data=L
380 [EVENT]: Frame Arrival
381 [RECEIVER]: Data 11 Received
382 [RECEIVER]: Sending Packet To Network Layer: Data=L
383 [TRANSMITTER]: End Acknowledge Time for sequence 11
384 [TRANSMITTER]: End Timer for sequence number 11
385 [RECEIVER]: Receiving Frame From Physical Layer: Seq=12, Ack=0, Data=M
386 [EVENT]: Frame Arrival
387 [RECEIVER]: Data 12 Received
388 [RECEIVER]: Sending Packet To Network Layer: Data=M
389 [TRANSMITTER]: End Acknowledge Time for sequence 12
390 [TRANSMITTER]: End Timer for sequence number 12
391 [EVENT]: Time out Error
392 [RECEIVER]: Data 13 not received
394 [TRANSMITTER]: Enable Network layer
395 [TRANSMITTER]: Receiving Packet From Network Layer: Data=N
396 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=13, Ack=0, Data=N
397 [TRANSMITTER]: Start Timer for sequence number 13
398 [TRANSMITTER]: Start Acknowledge Time for sequence 13
399 [EVENT]: Frame Arrival
400 [TRANSMITTER]: Receiving Packet From Network Layer: Data=0
401 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=14, Ack=0, Data=0
402 [TRANSMITTER]: Start Timer for sequence number 14
403 [TRANSMITTER]: Start Acknowledge Time for sequence 14
404 [EVENT]: Checksum Error
405 [TRANSMITTER]: Receiving Packet From Network Layer: Data=P
406 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=15, Ack=0, Data=P
407 [TRANSMITTER]: Start Timer for sequence number 15
408 [TRANSMITTER]: Start Acknowledge Time for sequence 15
409 [EVENT]: Frame Arrival
410 [TRANSMITTER]: Receiving Packet From Network Layer: Data=Q
411 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=16, Ack=0, Data=Q
412 [TRANSMITTER]: Start Timer for sequence number 16
413 [TRANSMITTER]: Start Acknowledge Time for sequence 16
```

```
414 [EVENT]: Frame Arrival
415
416 Waiting for event...
417
418 [RECEIVER]: Receiving Frame From Physical Layer: Seq=13, Ack=0, Data=N
419 [EVENT]: Frame Arrival
420 [RECEIVER]: Data 13 Received
421 [RECEIVER]: Sending Packet To Network Layer: Data=N
422 [TRANSMITTER]: End Acknowledge Time for sequence 13
423 [TRANSMITTER]: End Timer for sequence number 13
424 [EVENT]: Checksum Error
425 [RECEIVER]: Data 14 not received
427 [TRANSMITTER]: Enable Network layer
428 [TRANSMITTER]: Receiving Packet From Network Layer: Data=0
429 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=14, Ack=0, Data=0
430 [TRANSMITTER]: Start Timer for sequence number 14
431 [TRANSMITTER]: Start Acknowledge Time for sequence 14
432 [EVENT]: Time out Error
433 [TRANSMITTER]: Receiving Packet From Network Layer: Data=P
434 [TRANSMITTER]: Sending Frame To Physical Layer: Seg=15, Ack=0, Data=P
435 [TRANSMITTER]: Start Timer for sequence number 15
436 [TRANSMITTER]: Start Acknowledge Time for sequence 15
437 [EVENT]: Checksum Error
438 [TRANSMITTER]: Receiving Packet From Network Layer: Data=Q
439 [TRANSMITTER]: Sending Frame To Physical Layer: Seg=16, Ack=0, Data=0
440 [TRANSMITTER]: Start Timer for sequence number 16
441 [TRANSMITTER]: Start Acknowledge Time for sequence 16
442 [EVENT]: Frame Arrival
443
444 Waiting for event...
445
446 [TRANSMITTER]: End Acknowledge Time for sequence 14
447 [TRANSMITTER]: Receiving Packet From Network Layer: Data=0
448 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=14, Ack=0, Data=0
449 [TRANSMITTER]: Start Timer for sequence number 14
450 [TRANSMITTER]: Start Acknowledge Time for sequence 14
451 [EVENT]: Frame Arrival
452 [TRANSMITTER]: Receiving Packet From Network Layer: Data=P
453 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=15, Ack=0, Data=P
454 [TRANSMITTER]: Start Timer for sequence number 15
455 [TRANSMITTER]: Start Acknowledge Time for sequence 15
456 [EVENT]: Frame Arrival
457 [TRANSMITTER]: Receiving Packet From Network Layer: Data=Q
458 [TRANSMITTER]: Sending Frame To Physical Layer: Seq=16, Ack=0, Data=Q
459 [TRANSMITTER]: Start Timer for sequence number 16
460 [TRANSMITTER]: Start Acknowledge Time for sequence 16
461 [EVENT]: Frame Arrival
462
463 Waiting for event...
464
465 [RECEIVER]: Receiving Frame From Physical Layer: Seq=14, Ack=0, Data=0
466 [EVENT]: Frame Arrival
467 [RECEIVER]: Data 14 Received
468 [RECEIVER]: Sending Packet To Network Layer: Data=0
469 [TRANSMITTER]: End Acknowledge Time for sequence 14
470 [TRANSMITTER]: End Timer for sequence number 14
471 [RECEIVER]: Receiving Frame From Physical Layer: Seq=15, Ack=0, Data=P
472 [EVENT]: Frame Arrival
```

```
473 [RECEIVER]: Data 15 Received
474 [RECEIVER]: Sending Packet To Network Layer: Data=P
475 [TRANSMITTER]: End Acknowledge Time for sequence 15
476 [TRANSMITTER]: End Timer for sequence number 15
477 [RECEIVER]: Receiving Frame From Physical Layer: Seq=16, Ack=0, Data=Q
478 [EVENT]: Frame Arrival
479 [RECEIVER]: Data 16 Received
480 [RECEIVER]: Sending Packet To Network Layer: Data=Q
481 [TRANSMITTER]: End Acknowledge Time for sequence 16
482 [TRANSMITTER]: End Timer for sequence number 16
483
484 Frames:
485 Frame 1: Kind: 0 Seg: 0 Ack: 0
                                      Data: A
486 Frame 2: Kind: 0 Seq: 1 Ack: 0 Data: B
487 Frame 3: Kind: 0 Seq: 2 Ack: 0 Data: C
488 Frame 4: Kind: 0 Seq: 3 Ack: 0 Data: D
489 Frame 5: Kind: 0 Seq: 4 Ack: 0 Data: E
490 Frame 6: Kind: 0 Seq: 5 Ack: 0 Data: F
491 Frame 7: Kind: 0 Seq: 6 Ack: 0 Data: G
492 Frame 8: Kind: 0 Seq: 7 Ack: 0 Data: H
493 Frame 9: Kind: 0 Seq: 8 Ack: 0 Data: I
494 Frame 10: Kind: 0 Seq: 9 Ack: 0 Data: J
495 Frame 11: Kind: 0 Seq: 10 Ack: 0 Data: K
496 Frame 12: Kind: 0 Seq: 11 Ack: 0 Data: L
497 Frame 13: Kind: 0 Seq: 12 Ack: 0 Data: M
498 Frame 14: Kind: 0 Seq: 13 Ack: 0 Data: N
499 Frame 15: Kind: 0 Seq: 14 Ack: 0 Data: 0
500 Frame 16: Kind: 0 Seq: 15 Ack: 0
                                       Data: P
501 Frame 17: Kind: 0 Seq: 16 Ack: 0
                                       Data: Q
502 Result: A B C D E F G H I J K L M N O P Q
503
504
505 Process finished with exit code 0
506
```