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2 C BY RICHARD HUFFORD
3 C TYPED BY JM
4 INTEGER NUM,DEN,RF,DEF,COOP,LONG,SHORT,SH2(5)
5 K47R=JA ! Added 7/32/93 to report own old value
6 IF (M .GT. 1) GOTO 100
7 C INITIALIZE
8 NUM = 2
9 DEN = 2
  I renamed these to num_abb_def and num_abb_coop, which is more suggestive
  RF = 20
  I renamed this to streak_needed. I initialized to 21, because this is what it gets reset
  to in line 21 if NUM and DEN haven't yet changed. To adjust for this, I initialize
10 current_streak to 2. [Actually this initialization is a little more complex. It will only
  matter if the streak never gets reset, in which case the Fortran code will run line 37 on
  M=20. In that case, the Python code will increment current_streak on turns 2-19 and
  on turn 20 (before checking that current_streak = streak_needed). So we need 19
  increments to equal 21.]
11 DEF = 1
  I initialize to 2, since the the first turn gets skipped in my code.
12 COOP = 0
  LONG = 1
13 I call this num_agreements, initializing to 2 because line 28 gets run on the first turn
  always.
  SHORT = 5
14 The Fortran has SHORT equal to number of agreements in last four turns PLUS 1. I
  change this, and the comparisons in the IF statements.
15 DO 10 N = 1,5
16 SH2(N) = 1
17 10 CONTINUE
18 N = 1
19 MYLAST = 0
20 MYMOVE = 0
21 100 IF ((M .LE. RF) .AND. (J .EQ. DEF)) RF = M + (20 * NUM) / DEN + 1
  This is a streak-breaker. I just have current_streak reset.
22 C DETERMINE OPPONENT'S LONG AND SHORT TERM SENSE
23 200 N = MOD(N,4) + 1
24 SHORT = SHORT - SH2(N)
  Lines 23 and 24 just count the agreements in the last four turns.
25 IF (J .EQ. MYLAST) GOTO 500
26 SH2(N) = 0
27 GOTO 1000
28 500 LONG = LONG + 1
29 SHORT = SHORT + 1

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30 SH2(N) = 1
31 1000 MYLAST= MYMOVE
32 C MOVE
   MYMOVE = J
33 MYMOVE gets overwritten if the IF statements in lines 34 or 35 get run. So this is like
   an else.
34 IF ((LONG .LT. .625 * M) .OR. (SHORT .LT. 3)) MYMOVE = DEF
   IF ((LONG .GT. .9 * M) .AND. (SHORT .EQ. 5)) MYMOVE = COOP
35 Just for readability, I reorder as IF line 35 then COOP, IF NOT line 34 then Tit-for-Tat
   (actually from line 33), ELSE DEF (from line 34).
36 C SHOULD I RF HIM THIS TURN
37 IF (M .EQ. RF) MYMOVE = DEF
38 IF (M .LT. RF + 2) GOTO 2000
39 C I RF-D HIM 2 TURNS AGO. MUST NOT GET IN A FIGHT OVER NOTHING
40 MYMOVE = COOP
41 C DETERMINE SUCCESS OF RF
42 NUM = NUM + J
43 DEN = DEN + 1 - J
44 C DETERMINE NEXT TURN TO RF HIM
45 RF = M + (20 * NUM) / DEN + 1
46 2000 K47R = MYMOVE
47 RETURN
48 END

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