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1 EXTENDS Naturals _____ MODULE PrioritySymmetry _____
2 EXTENDS Naturals, Reals, FiniteSets, AdditionalFunctionOperators

4 CONSTANTS Client,      the set of clients
5           N

7 Priority  $\triangleq$  CHOOSE  $f \in [Client \rightarrow 1 \dots Cardinality(Client)] : Injective(f)$ 

*****
10 --algorithm Foo{
11   variable  $x \in Client$ ;
12   {  $x := (N - Priority[x])$ 
13   }
14 }
*****
16 BEGIN TRANSLATION
17 VARIABLES  $x, pc$ 

19  $vars \triangleq \langle x, pc \rangle$ 

21 Init  $\triangleq$  Global variables
22          $\wedge x \in Client$ 
23          $\wedge pc = \text{"Lbl\_1"}$ 

25 Lbl\_1  $\triangleq$   $\wedge pc = \text{"Lbl\_1"}$ 
26          $\wedge x' = (N - Priority[x])$ 
27          $\wedge pc' = \text{"Done"}$ 

29 Next  $\triangleq$  Lbl\_1
30          $\vee$  Disjunct to prevent deadlock on termination
31          $(pc = \text{"Done"} \wedge UNCHANGED\ vars)$ 

33 Spec  $\triangleq$  Init  $\wedge \Box[Next]_{vars}$ 

35 Termination  $\triangleq$   $\Diamond(pc = \text{"Done"})$ 

37 END TRANSLATION
38
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