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1 |----- MODULE OpOperators -----|
  |Operators for Op.|
6 |EXTENDS Naturals, Sequences, AdditionalSequenceOperators|
8 |-----|
  |The “Apply” operator which applies an operation op on the list l.|
  |Del: If pos > Len(l), the last element of l is deleted. This is realized by the DeleteElement|
  |operator.|
  |Ins: If pos > Len(l), the new element is appended to l. This is realized by the InsertElement|
  |operator.|
17 Apply(op, l)  $\triangleq$  CASE op.type = “Rd”  $\rightarrow$  l
18            $\square$  op.type = “Del”  $\rightarrow$  DeleteElement(l, op.pos)
19            $\square$  op.type = “Ins”  $\rightarrow$  InsertElement(l, op.ch, op.pos)
20            $\square$  OTHER  $\rightarrow$  l maybe an NOP
  |-----|
  |The “ApplyOps” operator which applies an operation sequence ops on the list l.|
26 RECURSIVE ApplyOps(-, -)
27 ApplyOps(ops, l)  $\triangleq$ 
28   IF ops =  $\langle \rangle$ 
29   THEN l
30   ELSE Apply(Last(ops), ApplyOps(AllButLast(ops), l))
31 |-----|
  |Check whether an operation op is legal with respect to the list l.|
35 IsLegalOp(op, l)  $\triangleq$  CASE op.type = “Del”  $\rightarrow$  op.pos  $\leq$  Len(l)
36            $\square$  op.type = “Ins”  $\rightarrow$  op.pos  $\leq$  Len(l) + 1
37 |-----|
  \ * Modification History
  \ * Last modified Tue Aug 28 15:07:47 CST 2018 by hengxin
  \ * Created Tue Aug 28 14:58:54 CST 2018 by hengxin

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