

```

1 |----- MODULE OpOperators -----|
2 | EXTENDS Naturals, Sequences, SequenceUtils |
3 |-----|
4 | Nop  $\triangleq$  PickNone(Nat) |
5 |
6 | Apply(op, l)  $\triangleq$  Apply an operation op on the list l. |
7 |   CASE op = Nop  $\rightarrow$  l |
8 |     □ op.type = "Rd"  $\rightarrow$  l |
9 |     □ op.type = "Del"  $\rightarrow$  DeleteElement(l, op.pos) Last(l) is deleted if pos > Len(l) |
10 |    □ op.type = "Ins"  $\rightarrow$  InsertElement(l, op.ch, op.pos) Append(l, ch) if pos > Len(l) |
11 |
12 | RECURSIVE ApplyOps(-, -) Apply an operation sequence ops on the list l. |
13 | ApplyOps(ops, l)  $\triangleq$  |
14 |   IF ops =  $\langle \rangle$  |
15 |     THEN l |
16 |   ELSE Apply(Last(ops), ApplyOps(AllButLast(ops), l)) |
17 |-----|
18 |
19 | \* Modification History
20 | \* Last modified Wed Jan 02 14:27:16 CST 2019 by hengxin
21 | \* Created Tue Aug 28 14:58:54 CST 2018 by hengxin

```