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# BUFFERODDEVEN SHARED RESOURCE

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CADT BufferOddEven

## OPERATIONS

**ACTION** Put:  $\mathbb{N}[i]$

**ACTION** Get:  $(Even \mid Odd)[i] \times \mathbb{N}[o]$

## SEMANTICS

### DOMAIN:

**STATE:**  $BufferOddEven = Sequence(ANY)$

**INVARIANT:**  $\forall mb \in BufferEvenOdd \bullet Length(mb) \leq MAX$

**INITIAL:**  $Length(self) = 0$

**CPRE:**  $Length(self) \leq MAX - 1$

**Put(d)**

**POST:**  $l = Length(self^{in}) \wedge Length(self) = l + 1 \wedge self(l + 1) = d^{in} \wedge self(1..l) = self^{in}$

**CPRE:**  $Length(self) > 0 \wedge (d \bmod 2 = 0 \leftrightarrow t = Even)$

**Get(t, d)**

**POST:**  $l = Length(self^{in}) \wedge self^{in}(1) = d \wedge self = self^{in}(2..l)$