
BOUNDEDBUFFER SHARED RESOURCE

CADT Boundedbuffer

OPERATIONS

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

ACTION Get: $\mathbb{N}[o]$

SEMANTICS

DOMAIN:

TYPE: *Boundedbuffer* = *Sequence*(*ANY*)

INVARIANT: $\forall mb \in \text{Boundedbuffer} \bullet \text{Length}(mb) \leq \text{MAX}$

INITIAL: $\text{Length}(\text{self}) = 0$

PRE: true

CPRE: $\text{Length}(\text{self}) \leq \text{MAX} - 1$

Put(*r*)

POST: $\text{self}^{\text{out}} = \text{self}^{\text{in}} + r$

PRE: true

CPRE: $1 \leq \text{Length}(\text{self})$

Get(*s*)

POST: $\text{self}^{\text{in}} = \text{self}^{\text{out}} + s$