
MULTIBUFFER SHARED RESOURCE

CADT Multibuffer

OPERATIONS

ACTION Put: $Sequence(ANY)[i]$

ACTION Get: $\mathbb{N}[i] \times Sequence(ANY)[o]$

SEMANTICS

DOMAIN:

TYPE: $Multibuffer = Sequence(ANY)$

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

INITIAL: $Length(self) = 0$

PRE: $Length(r) \leq \lfloor MAX/2 \rfloor$

CPRE: $Length(r) \leq MAX - Length(self)$

Put(r)

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

PRE: $n \leq \lfloor MAX/2 \rfloor$

CPRE: $Length(self) \geq n$

Get(n, s)

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