

Tutorial 10

1.

left_arrow : CHAR
left_arrow \notin printing

LeftArrow
ch? : CHAR
ch? = left_arrow

BOF
Editor
left= $\langle \rangle$

Backward
Δ Editor
ch? : CHAR
ch? = left_arrow
right' = $\langle \text{last}(\text{left}) \rangle \frown \text{right}$
left' = front(left)

$T_Backward \triangleq \text{Backward} \vee (\text{BOF} \wedge \text{LeftArrow} \wedge \exists \text{Editor})$

2.

Drain-OK
Δ Storage_tank
amount?: \mathbb{N}
contents - amount? ≥ 0
contents' = contents - amount?

OverDrain
\exists Storage_tank
amount?: \mathbb{N}
r!: seq CHAR
contents - amount? < 0
r!: "Unable to do drain operation!"

Successful-Drain
\exists Storage_tank
amount?: \mathbb{N}
r!: seq CHAR
contents - amount? $\geq \text{danger_level}$

r!: "This is a successful drain operation!"

Drain

Drain-OK \vee OverDrain \vee Successful-Drain