Cotainer

$contents : \mathbb{N}$
$capacity : \mathbb{N}$

$contents \leq capacity$

Indicator

$light : \{off, on\}$
$reading : \mathbb{N}$
$danger\_level : \mathbb{N}$

$light = on \Leftrightarrow reading \leq danger\_level$

*Indicator*2

$light2 : \{off, on\}$
$reading : \mathbb{N}$
$danger\_level2 : \mathbb{N}$

$light = on \Leftrightarrow reading \leq danger\_level2$

Storage_tank

Container
Indicator
*Indicator*2

$reading = contents$
$capacity = 5000$
$danger\_level = 50$
$danger\_level2 = capacity * 0.95$

half

$half\_OK \lor half\_EMPTY$

half_OK

$\Delta Storage\_tank$

$contents/2 > danger\_level$
$contents' = contents/2$

half_EMPTY

$\Delta Storage\_tank$

$contents < danger\_level$
$contents' = danger\_level$

double

$$double\_OK \lor double\_OVERFLOW$$

double_OK

$$\Delta Storage\_tank$$

$$contents * 2 < danger\_level$$
$$contents' = contents * 2$$

double_OVERFLOW

$$\Delta Storage\_tank$$

$$contents * 2 \geq danger\_level$$
$$contents' = danger\_level2$$