

An operation to check a staff member into the building is specified as follows:

CheckIn

ΔLog

name? : *Staff*

$name? \in out$

$in' = in \cup \{name?\}$

$out' = out \setminus \{name?\}$

$users' = users$

This has an input parameter representing the member of staff to be checked in. The predicate part says that

- The staff member to be checked in must currently be out. This is a *pre-condition* on the operation.
- The staff member is added to the set *in*.
- The staff member is removed from the set *out*.
- The overall set of users remains unchanged.

Similarly, an operation to check a staff member out of the building may be specified as follows:

CheckOut

ΔLog

name? : *Staff*