

BIRTHDAY_BOOK

model: FUN[NAME, BIRTHDAY]

put(n: NAME; d: BIRTHDAY)

ensure model = **old** model \uparrow [n,d]

-- infix symbol for override operator: $@<+$

remind(d: BIRTHDAY): ARRAY[NAME]

ensure

Result.count = (model \triangleright {d}).count

\forall name \in (model \triangleright {d}).domain: name \in Result

-- infix symbol for range restriction: model $@>$ (d)

count: INTEGER -- number of names

invariant:

count = model.count

model: FUN[NAME, ..]

BIRTHDAY

day: INTEGER

month: INTEGER

invariant

$1 \leq \text{month} \leq 12$

$1 \leq \text{day} \leq 31$

remind: ARRAY[NAME]

NAME

item: STRING

invariant

item[1] \in A..Z

