

# An Example of Formal Specification in Z

*BirthdayBook*

Gives the name of the schema \_\_\_\_\_

$known : \mathbb{P} NAME$

Variable declarations go above the dividing line

$birthday : NAME \leftrightarrow DATE$

$known = \text{dom } birthday$

Conditions go beneath the line

*AddBirthday*

Name of the Schema \_\_\_\_\_

$known : \mathbb{P} NAME$

Explicit inclusion of all declarations

$known' : \mathbb{P} NAME$

$birthday : NAME \leftrightarrow DATE$

$birthday' : NAME \leftrightarrow DATE$

$name? : NAME$

$date? : DATE$

$known = \text{dom } birthday$

Invariants included by hand

$known' = \text{dom } birthday'$

$name? \notin known$

Predondition

$birthday' = birthday \cup \{name? \mapsto date?\}$

Postcondition