Formally

Given $R(A_1, A_2, \ldots A_n)$ — Attributes

R → Relation name

Given $dom(A_1)$
$dom(A_2)$
$dom(A_n)$

Valid State

$r(R) \subset dom(A_1) \times dom(A_2) \ldots \times dom(A_n)$

ex.)

$R(A_1, A_2)$

$dom(A_1) = \{0, 1\}$

$dom(A_2) = \{a, b, c\}$

A_1	A_2

1 possible valid state.

$r(R) \subset dom(A_1) \times dom(A_2)$

then ↓ Subset

Combinations between an possible values

$\{ \langle 0,a \rangle, \langle 0,b \rangle, \langle 0,c \rangle, \langle 1,a \rangle, \langle 1,b \rangle, \langle 1,c \rangle \}$

Possible Valid state

A_1	A_2
0	a
0	b
1	c

← 1 possible Valid State given the domains for relation R.