

## Phase 11 . 8 : Relational Image

The relational image  $R(\_ S \_)$  gives the image of set S under relation R.

### Example 1 : Simple relational image

$$R(\{ S \})$$

### Example 2 : Relational image with set literal

$$R(\{ 1, 2, 3 \})$$

### Example 3 : Relational image with singleton set

$$parentOf(\{ john \})$$

### Example 4 : Relational image with composition

$$R \circ S(\{ A \})$$

### Example 5 : Relational image with inverse

$$R^{-1}(\{ S \})$$

### Example 6 : Set comprehension with relational image ( Solution 35 pattern )

$$\{ p: Person \mid p \in \text{dom } parentOf \bullet (p, parentOf(\{ p \})) \}$$

### Example 7 : Chained relational images

$$R(\{ S \})(\{ T \})$$