

Phase 11 . 9 : Generic Type Instantiation

Example 1 : Basic Generic Instantiation

(a)

$\emptyset[\mathbb{N}]$

(b)

$\text{seq } \mathbb{N}$

(c)

$\mathbb{P} X$

Example 2 : Complex Type Parameters

(a)

$\emptyset[\mathbb{N} \times \mathbb{N}]$

(b)

$\mathbb{P}(\mathbb{P} X)$

(c)

$\text{seq}(\mathbb{N} \times \mathbb{N})$

Example 3 : Multiple Type Parameters

(a)

$Type[A, B]$

(b)

$Container[X, Y, Z]$

Example 4 : Nested Generic Instantiation

(a)

$Type[List[\mathbb{N}]]$

(b)

$Container[\text{seq } \mathbb{N}]$

Example 5 : Chained Generic Instantiation

(a)

$Type[\mathbb{N}][M]$

Example 6 : Generic Types elem Expressions

(a)

$$x \in Type[\mathbb{N}]$$

(b)

$$A \subseteq \mathbb{P} X$$

(c)

$$\emptyset[\mathbb{N}] \cup \{x\}$$

Example 7 : Generic Types elem Set Comprehensions

(a)

$$\{ s : \mathbb{P} \mathbb{N} \mid s = \emptyset[\mathbb{N}] \}$$

(b)

$$\{ x : \text{seq } \mathbb{N} \mid \#x > 0 \}$$