Phase 11 . 9 : Generic Type Instantiation

Example 1 : Basic Generic Instantiation

(a) $\varnothing[\mathbb{N}]$

(b) $seq[\mathbb{N}]$

(c) $P[X]$

Example 2 : Complex Type Parameters

(a) $\varnothing[\mathbb{N} \times \mathbb{N}]$

(b) $P[\mathbb{P}\ X]$

(c) $seq[\mathbb{N} \times \mathbb{N}]$

Example 3 : Multiple Type Parameters

(a) $Type[A, B]$

(b) $Container[X, Y, \mathbb{Z}]$

Example 4 : Nested Generic Instantiation

(a) $Type[List[\mathbb{N}]]$

(b) $Container[seq[\mathbb{N}]]$

Example 5 : Chained Generic Instantiation

(a) $Type[\mathbb{N}][M]$

Example 6 : Generic Types in Expressions

(a) $x \in Type[\mathbb{N}]$

(b) $A \subseteq P[X]$

(c) $\varnothing[\mathbb{N}] \cup \{x\}$

Example 7 : Generic Types in Set Comprehensions

(a) $\{s : P[\mathbb{N}] \mid s = \varnothing[\mathbb{N}]\}$

(b) $\{x : seq[\mathbb{N}] \mid \#x > 0\}$