Phase 4 : Z Notation Basics

Example 1 : Given Types

$[Person, Company]$

Example 2 : Free Types

$Status ::= active \mid inactive \mid suspended$

$Answer ::= yes \mid no$

Example 3 : Abbreviations

adult == age $\geq$ 18
positive == x ¿ 0

Example 4 : Axiomatic Definitions

$$
\begin{array}{|l}
\hline
population : \mathbb{N} \; capacity : \mathbb{N} \\
\hline
population \leq capacity \; capacity > 0 \\
\end{array}
$$

Example 5 : Schema Definitions

$$
\begin{array}{|l}
\hline
\underline{Library} \\
books : \mathbb{N} \; members : \mathbb{N} \\
\hline
books > 0 \; members \geq 0 \\
\hline
\end{array}
$$

$$
\begin{array}{|l}
\hline
\underline{BankAccount} \\
balance : \mathbb{N} \; overdraft : \mathbb{N} \\
\hline
balance \geq 0 \; overdraft \geq 0 \\
\hline
\end{array}
$$