CSCI910 – Software Requirements, Specifications and Formal Methods

Tutorial 8, CCNU Summer 2020

Objectives

- Get familiar with Z notation
- Get familiar with predicates and logic

Q1: Write the table of the situations that satisfy the following predicate

> d1, d2: 1 ... 6
> _____
> ¬ (d1 + d2 = 7)

Q2: Write the table of the situations that satisfy the following predicate

> d1, d2: 1...6
> _____
> (d1 + d2 = 7) ⇔ (d1 < d2)

Q3: Define a relation phase$_R$ from the temperature to phase, consistent with the definitions of temp and phase in the lecture

Q4: What is the meaning of this predicate?

$x \in \text{dom } f \Rightarrow f\, x = 10$

Q5: For the Calendar example introduced in the lecture, please define the function "month" that extracts the MONTH component from a DATE