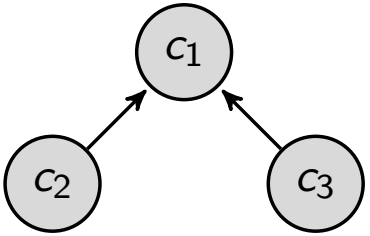
Constraint Relationships – Idea

Institute for Software & Systems Engineering

- Variables: X, Y, Z
- Domains: $\{0, 1, 2\}$
- Constraints:
  - $c_1 : x + 1 = y$
  - $c_2 : z = y + 2$
  - $c_3 : x + y \leq 3$



- Not all three constraints can be satisfied simultaneously
- E.g. c_2 forces z to be 2 and y to be 0, conflicting with c_1
- We can choose between solutions satisfying $\{c_1, c_3\}$ or $\{c_2, c_3\}$
- How to settle this conflict?
  - Go for the *most important* soft constraints