Homework 5 - Exercises

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1 Exercise 3.17

The original expression

$$\textbf{if } (x \leq y) \textbf{ then } x := x + y \textbf{ else } y := y + 1 \tag{1}$$

combined with the region **A** that is expressed as $(0 \leq x \leq 5)$ gives the following expression after some simplification:

$$[(x' < 2y') \wedge (0 \leq x' - y' \leq 5)] \vee [(x' \geq y' - 1) \wedge (0 \leq x' \leq 5)] \tag{2}$$

2 Exercise 3.21

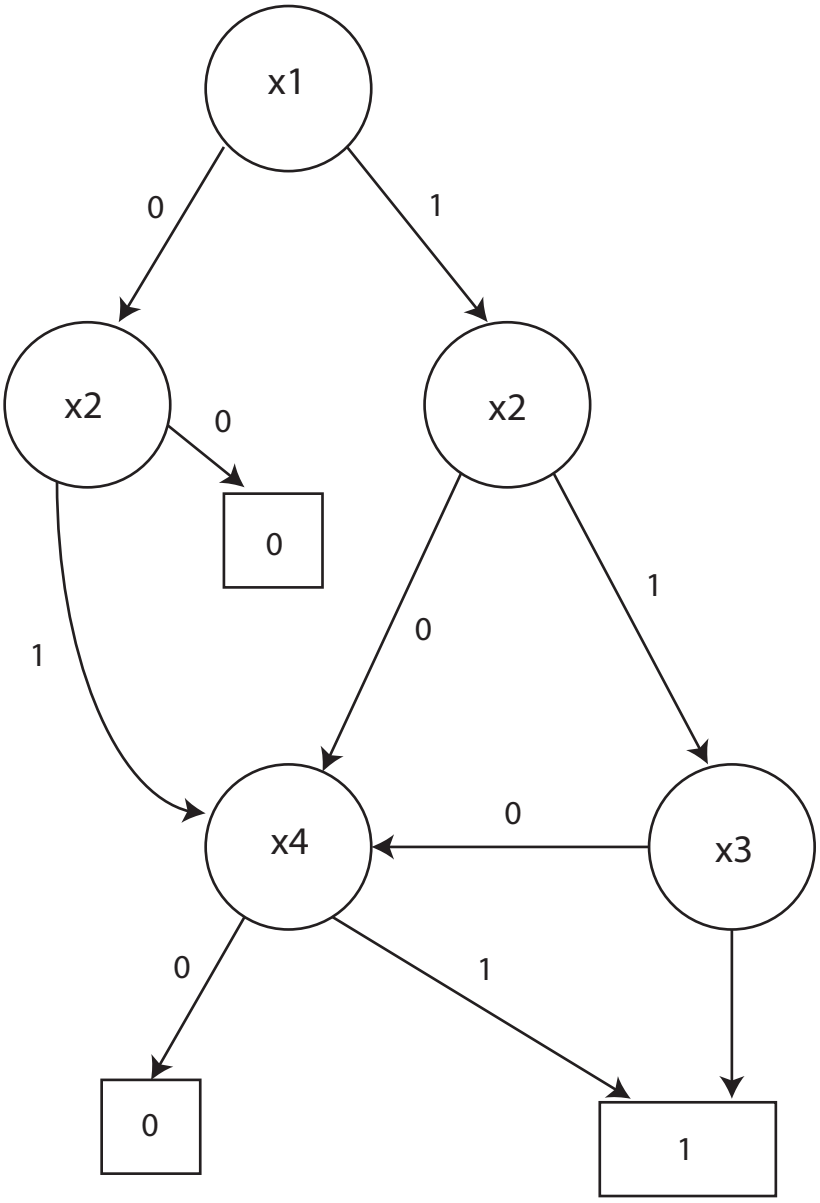

Figure 1: minimal ROBDD for the specification

3 Exercise 4.2

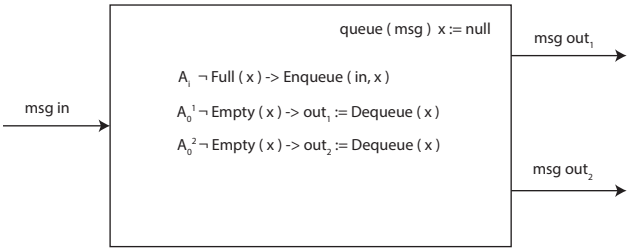

Figure 2: System