

$$C0 \wedge st \Rightarrow x = a$$

$$C0 \wedge st \Rightarrow y = b$$

$$C0 \wedge st \wedge x > 0 \wedge x \geq y \Rightarrow \text{next}(x) = x - y$$

$$C0 \wedge st \wedge x > 0 \wedge x \not\geq y \Rightarrow \text{next}(x) = y - x$$

$$C1 \wedge l \wedge x > 0 \wedge x \geq y \Rightarrow \text{next}(x) = x - y$$

$$C1 \wedge l \wedge x > 0 \wedge x \not\geq y \Rightarrow \text{next}(x) = y - x$$

$$C1 \wedge l \wedge x \not> 0 \Rightarrow \text{gcd} = y$$

*Data-Flow Actions*

$$C0 \wedge st \Rightarrow \text{next}(l) = \text{true}$$

$$C1 \wedge l \wedge x > 0 \Rightarrow \text{next}(l) = \text{true}$$

*Control-Flow Actions*