

# Synthesized solution for benchmark 01loopevent.c

```

solution
├─ (Partial), cond  $c_{16} : a > 5$ 
│   └─  $\left\{ \begin{array}{l} \text{Case } \neg c_{16} : \\ k_1 = ((a_i \leq 4 \vee b_j \leq 3) \cdot E() = \text{eventA}(); \cdot I_i = i + i, ? \quad 1; \cdot J_j = j + i, ? \quad 1;) * (\neg a_i \leq 4 \wedge \neg b_j \leq 3) \\ k_2 = ((a_i \leq 4 \vee b_j \leq 3) \cdot D_a = i + i, ? \quad j; \cdot E() = \text{eventA}(); \cdot I_i = i + i, ? \quad 1; \cdot J_j = j + i, ? \quad 1; \cdot (c_a > 5 \cdot E() = \text{eventA}(); + \neg c_a > 5 \cdot 1)) * (\neg a_i \leq 4 \wedge \neg b_j \leq 3) \end{array} \right.$ 
└─ AComplete
    └─  $\left\{ \begin{array}{l} \text{Axioms} : \{D = 1\} \\ k_1 = ((a_i \leq 4 \vee b_j \leq 3) \cdot E() = \text{eventA}(); \cdot I_i = i + i, ? \quad 1; \cdot J_j = j + i, ? \quad 1;) * (\neg a_i \leq 4 \wedge \neg b_j \leq 3) \\ k_2 = ((a_i \leq 4 \vee b_j \leq 3) \cdot D_a = i + i, ? \quad j; \cdot E() = \text{eventA}(); \cdot I_i = i + i, ? \quad 1; \cdot J_j = j + i, ? \quad 1; \cdot 1 \cdot 1) * (\neg a_i \leq 4 \wedge \neg b_j \leq 3) \end{array} \right.$ 

```

*Remaining 65 solutions omitted for brevity.*